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MINISTRY OF HEALTH

Central Health Services Council

STANDING MEDICAL ADVISORY COMMITTEE

Accident and Emergency Services

Report of the Sub-Committee

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I. INTRODUCTION

1. At their meeting on 8th December, 1959, the Standing Medical Advisory Committee agreed to set up a Sub-Committee to make a special study of the problem of the accident services. The terms of reference were: "To consider the organisation of hospital casualty and accident services and to make recommendations regarding their future development." The Chairman was Sir Harry Platt and five other members of the Standing Medical Advisory Committee, Mr. Hedley Atkins (later Professor Hedley Atkins), Dr. S. Whately Davidson, Dr. E. J. Rees, Dr. A. Talbot Rogers and Professor R. E. Tunbridge, served on the Sub-Committee. The following additional members were co-opted: Dr. J. O. F. Davies, Mr. F. W. Holdsworth, Sir Geoffrey Jefferson, Mr. Rainsford Mowlem, Mr. G. A. Phalp, Mr. J. C. Scott, Miss D. Stringfellow.

2. Two members, Dr. Rees and Sir Geoffrey Jefferson, died during the course of our deliberations and Dr. J. O. F. Davies resigned on secondment to the Ministry of Health, though he continued to attend meetings as a representative of the Ministry. Two new members, Mr. D. W. C. Northfield and Dr. F. N. Marshall, were co-opted to replace those lost to the Sub-Committee. One of our members, Mr. Rainsford Mowlem, does not wholly subscribe to our report.

3. The members of the Sub-Committee would like to express their appreciation of the invaluable assistance given to them throughout by members of the Department. They would like first of all to thank Mr. S. H. Findlay, who became Secretary of the Sub-Committee after Mr. C. R. O. Jones in June, 1960; Mr. Findlay has carried a heavy burden with zest and cheerfulness. The work of Mr. K. M. Francis and his staff in the analysis of the Casualty Survey and other statistical documents is a notable feature of the Report. And finally, in the sifting and correlation of the considerable amount of documentary material, the Sub-Committee has enjoyed the wise counsel of Dr. J. O. F. Davies and Dr. J. L. McLetchie.

4. It will be seen that the phrase "Accident and Emergency Services" is used in the title of this report, though it differs from that in our terms of reference. The reasons for this change are given in paragraphs 58—62 below. Where the word "Casualty" is used in this report, it is merely a convenient description of the present service and does not imply acceptance of it as a description of what the service ought to be.

5. Our first meeting was held on 20th April, 1960, and we have met nineteen times in all. A list of the bodies and individuals who submitted written evidence to us will be found in Appendix 1.

6. The following are our most important recommendations:—

(i) The name "Casualty Service" should be altered to "Accident and Emergency Service."

(ii) The medical staffing of major accident and emergency units should be increased to allow each unit to have three consultant surgeons, each devoting a substantial part of his time to this work, supported by adequate numbers of intermediate and junior medical staff.

(iii) The number of accident and emergency units should be greatly reduced, so that each can be adequately staffed at all times. A unit should not normally serve a population of less than 150,000.

(iv) Many existing units are in quite unsuitable accommodation and much building will be required if even the reduced number of units are to be satisfactory.

(v) Accident beds should be provided at the rate of 30 to 35 per 100,000 population and supported by an adequate number of associated geriatric beds.

(vi) Responsibility for seeing that proper clinical records are kept should rest upon the consultant in administrative charge of the unit.

7. It is generally agreed that there is a pressing need in the hospital service of England and Wales to review, reorganise and extend the service to deal adequately with all types of injury, and that this problem must be viewed as a separate issue from that of ensuring facilities for patients with trivial ailments who for one reason or another use the hospital services.

8. Some of the organisational problems inherent in the provision of such a service have been recognised for a long time. The development of principles of segregation, continuity of treatment and unity of control, first applied to fractures but later extended to a wider range of injuries of the locomotor system, led to the establishment between the two World Wars of orthopaedic and accident units in many teaching and non-teaching hospitals. During the past twelve years—the period of expansion of the consultant services of the National Health Service—attempts have been made to establish services of this kind to cover some of the smaller population areas outside the main towns.

9. Some measure of the consequences to the community of the toll of accidents may be seen in the statistics of fatal accidents. In 1960 there were 23,120 deaths from accidents, poisonings and other violence recorded in England and Wales, of which nearly a third were due to road accidents and almost the same number to accidents in the home. These deaths comprise about 4 per cent of deaths from all causes, the proportion being higher for males (5 per cent) than for females (3·6 per cent). Deaths by violence occur among people of all ages and are not concentrated among the elderly as are deaths from natural causes. It may be estimated that one-eighth of the total loss of working life to the community among males, as measured by death before attaining the age of 65, is due to death by violence. No information is available by which to measure the possibly much greater loss due to serious incapacity resulting from non-fatal accidents.

10. One of the most important new factors contributing to the need for a country-wide accident and emergency service to deal with the seriously injured seven days a week and twenty-four hours a day is the spectacular increase over recent years in numbers of road accidents. Not only is the pattern of injuries sustained in such accidents one of great severity and multiplicity, but the accidents occur at all times of the day and night and are widely dispersed

geographically. In Great Britain in 1960, 84,443 persons were injured in road accidents seriously enough to require attention in hospital. A high proportion of fatal road accidents are among young adults, particularly males, and a considerable loss to the community of working life is involved. We welcome the efforts being made to prevent road accidents and recommend that hospitals should do all they can to co-operate in the researches being carried out into the best methods of prevention, for example those conducted by the Road Research Board of the Department of Scientific and Industrial Research into the problem of chest injuries.

11. Accidents in the home are also very numerous and may well be on the increase, in part on account of the increasing numbers of elderly people in the population. Home accidents resulted in 7,032 deaths in England and Wales in 1960. Nearly two-thirds of them were from falls, three-quarters of the victims being aged 65 or over. Accidents occurring in the home make as great demands on hospital resources as do road accidents. Many of the home accidents are to elderly patients whose stay in hospitals tends to be long.

12. Factory, coal-mining and other industrial accidents also cause a large number of injuries, though many of them are not serious. The number needing hospital treatment is not known, but in respect of all industrial accidents the Ministry of Pensions and National Insurance recorded some 61,000 spells of certified incapacity for fracture cases and 19,000 for head injuries other than fractures in Great Britain in twelve months during 1958-9.

13. In the hospital service seriously injured persons are usually first received in "casualty" departments, where at present persons with minor injuries who seek hospital treatment are also seen as well as a considerable number of patients with medical or surgical conditions which are not the result of accidents. Some five million new patients are at present being seen annually in hospital "casualty" departments, the numbers having increased by 24 per cent between 1953 and 1960. We estimate (from a special survey mentioned in Chapter 3) that some 60 per cent of these attendances are the result of injuries, though of these fewer than one in ten leads to admission to hospital.

14. In the following chapter we set out the views of the expert bodies whose evidence we invited, and some who have reported independently on the subject, on the shortcomings of the present accident services. In Chapter 3 we discuss in detail factual evidence of the services given in existing "casualty" departments and of the types of accident for which in-patient provision is made, and we draw attention to the case-loads at present being handled. We believe that in this chapter sufficient evidence is presented to indicate the pattern of the accident cases which reach the hospitals as it exists at present. Chapter 4 discusses the function of an accident and emergency department of a general hospital and the circumstances which have led many such hospitals to deal with large numbers of "casual" patients with minor ailments apart from the serious accident cases. We go on to give our main recommendations for an organisation in which serious cases would be dealt with in special accident centres in a number (much smaller than at present) of hospitals specially equipped and staffed to deal with

them, and minor accident cases would be dealt with separately by general practitioners either in their own group practices, or on a rota at a cottage hospital, or on the staff of a larger hospital under consultant supervision. Chapter 5 discusses the staffing of the special accident departments and the need for consultant supervision. Chapter 6 describes the type of ambulance service required to support the hospital accident and emergency services, and the need for co-operation between these two parts of the organisation. Statistical data supporting the points made in the body of the report will be found in the Appendices.

II MAIN POINTS OF EVIDENCE RECEIVED AND RELEVANT REPORTS

15. In a leading article on the Accident Services on 14th July, 1961, the Times said "On the general outlines of what is wanted there is now a wide measure of agreement." This article referred primarily to three reports—the Memorandum on Accident Services published in 1959 by the British Orthopaedic Association, "Casualty Services and their Setting: a Study in Medical Care" published in 1960 by the Nuffield Provincial Hospitals Trust and the Interim Report of the Review Committee on the Accident Services of Great Britain and Ireland, published in 1961 under the auspices of the British Medical Association and representing the views of seventeen medical organisations concerned with the problem. The written evidence submitted to us by the bodies listed in Appendix I in turn broadly agreed with the recommendations of these reports, and the following paragraphs summarise the main points of this remarkable, and welcome, consensus of opinion.

INADEQUACY OF PRESENT ACCIDENT SERVICES

16. There was general agreement that the present services were not adequate to deal with the continually increasing numbers of serious accidents. The British Orthopaedic Association was convinced that the accident services of Great Britain are seriously inadequate by reason of four things: failures of organisation, failures of staffing, failures of accommodation and failures of surgical training. The Accident Services Review Committee again gave four main criticisms:

1. Absence of regional organisation and co-ordination.
2. Too many small departments struggling to provide a casualty service.
3. Inadequate reception and waiting accommodation; lack of minor operating rooms and access to special departments.
4. Shortage of sufficiently experienced medical, nursing and auxiliary staff.

The Nuffield Report gave examples of these shortcomings at individual hospitals. The Association of Hospital Management Committees in their evidence confirmed that this dissatisfaction was widespread; only 25 per cent of 140 Management Committees replying to a Questionnaire on the subject expressed satisfaction with the existing arrangements, though they noted that in most Regions schemes for improvements were either in progress or contemplated.

USE OF CASUALTY SERVICES

17. It was widely agreed that one reason for inadequate treatment of injuries was the crowding of many departments with patients who could have been treated by general practitioners. The College of General Practitioners went so far as to say "Three-quarters of the casualties who for one reason or another go *direct* to hospital could well be cared for by their family doctors—they are really general-practitioner patients in the wrong place and they should be encouraged to go to their own family doctor first wherever possible." To make this easier, they recommended that general practitioners in group practices should arrange a rota so that one is always ready to answer emergency calls. The Royal College of Nursing suggested that "casualty" departments were sometimes used as a short cut to hospital treatment where there was a long waiting time for out-patient appointments, and the Executive Councils Association mentioned similar abuse as a short cut to admission.

NEED FOR REGIONAL ORGANISATION

18. The British Orthopaedic Association said that the Government should authorise each Regional Hospital Boad, in conjunction with Boards of Governors of teaching hospitals, to set up forthwith at least one comprehensive accident service within its area. The Nuffield Report emphasised the need for detailed surveys of the needs of each area, and said that in order to design an accident service even at regional level it would be necessary to produce facts which were at present not obviously available, about the extent, nature and weight of demand. There was, the Report concluded, a real and urgent need for the Regional Hospital Boards in association with teaching hospitals to initiate survey parties consisting of clinicians and those trained in social medicine techniques, to carry out operational studies of area arrangements.

SMALL HOSPITALS

19. There was widespread agreement with the Review Committee's view that too many small departments were struggling to provide an accident service. All major injuries should be taken direct to a hospital providing a full accident service, and even minor injuries should go only to selected small hospitals with either resident medical staff or an effective rota of general practitioners able to attend at short notice.

SIZE AND NUMBER OF ACCIDENT UNITS

20. The evidence and reports agreed that an accident unit must be capable of dealing with major injuries at any time of the day or night, and this requirement imposed a lower limit on the size of hospital and population required to support one. The British Orthopaedic Association did not give a lower limit of population, but put the average requirement at 150 to 250 accident beds per ½m. The Nuffield Report said that the catchment area should if possible have a population of 300,000. The Review Committee recommended a ratio of 25 accident beds per 100,000 population and said that an ordinary accident unit should have not less than 25 or more than 100 beds, excluding beds for neuro-surgery, plastic surgery and thoracic surgery.

CENTRAL ACCIDENT UNITS

21. Many bodies said that there should be a third tier in the organisation, above the small hospital and the accident unit proper—a central unit which

would provide special services such as neuro-surgery and plastic and thoracic surgery which might not be found at the ordinary accident unit. The Review Committee put the requirements for accidents at about ten beds for neuro-surgery, five for plastic and five for thoracic surgery per 1m. population, and recommended that the central unit should serve a population of about 1½m. Some of the bodies advocating these central accident units thought that they should co-ordinate the work of the ordinary units in their areas.

SPECIAL ACCIDENT HOSPITALS

22. It was generally agreed that special accident hospitals were not desirable; an accident unit should be provided as a department of a general hospital. The Review Committee considered the possible merits of an "Accident Hospital", but was unanimously of the opinion that all accident units of whatever size should be closely associated with general hospitals and preferably should be an integral part of them. The Association of Hospital Management Committees came close to similar unanimity; among the Management Committees replying to the Questionnaire opinion was overwhelmingly against the provision of accident units as separate hospitals, and in favour of special centres related to general hospitals or accident departments of general hospitals.

MEDICAL STAFFING

23. The nominal nature of consultant supervision in many departments was criticised, and it was agreed that a consultant surgeon must be available, in fact and not only in theory, at all times at every unit dealing with major injuries. Another serious problem was the difficulty of obtaining good quality resident medical staff for "casualty" work, especially in hospitals in unpopular districts away from the main centres. Remedies suggested included greater emphasis on the treatment of trauma in the training of surgeons and the employment of general practitioners on a sessional basis in "casualty" departments. The possible effect of this on the crowding of "casualty" departments with patients who do not really need hospital treatment was pointed out by the Executive Councils Association, who suggested that an experienced senior general practitioner "on the door" of a "casualty" department for the purpose of "screening" cases might have excellent results.

NON-MEDICAL STAFFING

24. The Royal College of Nursing and other bodies emphasised that an accident unit must have a 7-day 24-hour service not only of medical and nursing staff but of other staff, e.g. radiographic, clerical, domestic and portering. Emphasis was laid on the need to relieve medical and nursing staff of the numerous tasks not requiring their special skills which had to be performed in connection with accidents.

AMBULANCE SERVICES

25. Many bodies, including those particularly connected with the ambulance services—the County Councils Association, Association of Municipal Corporations, Society of Medical Officers of Health, National Association of Ambulance Officers and Institute of Certified Ambulance Personnel—stressed the importance of co-operation between the ambulance and hospital authorities. Ambulance crews must know which hospitals in each area had been designated to receive

major injuries, and must be trained, again in co-operation with the hospital authority, in modern methods of handling seriously injured patients. Hospitals should ensure a rapid turn-round of ambulances bringing accident cases to them.

INDUSTRIAL MEDICAL SERVICES

26. The Association of Industrial Medical Officers drew attention to the important part played by medical services in industry, not only in giving immediate treatment to those injured at work, but in advising on the prevention of accidents and the provision of rehabilitation and alternative employment for the injured. The College of General Practitioners favoured an increasing use of general practitioners part-time in the industrial medical services.

III THE WORK OF THE EXISTING CASUALTY SERVICES

27. In this chapter we indicate, from the figures available, the general increase in the work done in hospital "casualty" departments in recent years; we discuss in detail the results obtained from a special survey conducted at our request to show the kind of work at present done in "casualty" departments; and we also discuss information derived from the General Register Office annual in-patient enquiry, which shows the numbers of accident cases of all kinds which receive in-patient treatment.

THE GENERAL UPWARD TREND

28. Total attendances at "casualty" departments increased by 22 per cent between 1949 and 1960, as compared with a 12 per cent increase for out-patient departments. In the case of "casualty" departments this increase was concentrated in the earlier part of the period, but this was not so for out-patient departments.

The statistics did not distinguish new patients seen in "casualty" departments (i.e. those making their first appearance with a given condition) until 1953. In the period 1953-1960 new patients in "casualty" departments increased by 24 per cent, though this must not be taken as a measure of work done in these departments because total attendances only increased by 7 per cent, a figure no higher than for out-patient departments. The increase in numbers of new patients was, however, much greater for "casualty" departments than for out-patient departments.

THE KIND OF WORK DONE IN "CASUALTY" DEPARTMENTS

29. The special survey, which covers the work done in the "casualty" departments of hospitals in England and Wales in the week 24th to 31st October, 1960, provides data for a statistical appreciation of the present position. It covers 789 hospitals reported as having "casualty" departments in which at least one new patient was seen in the survey week. Altogether 104,660 new patients were seen, and in total there were 228,950 attendances of new and old patients. An account of the form and scope of the enquiry, together with detailed tables, is given in Appendix 2. The following paragraphs draw attention to aspects of the work of "casualty" departments with which the Committee is particularly concerned.

30. We examined the evidence of the survey to see how the services of the "casualty" department came to be invoked, before going on to study the type of condition for which patients attended the department, the grades of medical staff who saw them at their first attendance and the form of subsequent treatment prescribed for them (e.g. whether this was to be given in the "casualty" or another department of a hospital or by a general practitioner). As a preliminary step an examination of the evidence collected was carried out to ascertain the proportion of new patients who attended with letters from their general practitioners, the proportion of accident cases brought in by ambulance or other transport and the proportion who attended of their own volition. It was evident that the number of hospitals which operate an open-door policy is large, since 50 per cent of all new patients arrived of their own volition. The proportion attending with letters from a general practitioner was 25 per cent, while 18 per cent were accident cases brought in by ambulance or other transport. These proportions broadly reflect a general pattern, but there are some notable exceptions: for example, in Wales 46 per cent of new patients were referred to "casualty" departments by general practitioners; in the central areas of some large towns, particularly London, the proportions attending of their own volition were exceptionally high; in the Sheffield, Manchester and Wessex regions the proportion of accident cases brought in by ambulance or other transport was high (23 per cent) and in the East Anglian region this proportion was low (12 per cent).

31. The fact that patients attended a "casualty" department of their own volition does not necessarily mean that the conditions which brought them there were trivial. Most of the patients who attended of their own volition received further medical attention of some kind: 61 per cent were asked to attend again at the "casualty" department or to go to an out-patient department, 10 per cent were referred to a general practitioner and 2 per cent were prescribed in-patient treatment. Fewer than a quarter of them were dismissed after their first attendance and it is likely that most of these were given some form of treatment before departing.

32. The need for free access of patients to "casualty" departments depends in part on the extent to which alternative general practitioner facilities are readily available. Many patients attending a "casualty" department of their own volition are people who feel in need of medical attention and can get to hospital without an ambulance, and who do not wait to see their general practitioner first. Some indication of the reasons for this is afforded by the survey evidence of the age and sex structure of the patients attending "casualty" departments. Two thirds of all new patients were males, an exceptionally high proportion of them were in the 15—29 age group, and within this group the proportion referred by a general practitioner was relatively low. Such patients, many of whom will be working at a distance from their homes and have accidents when away from home, no doubt find a hospital "casualty" department a great convenience. The fact that the proportion of all new patients attending of their own volition was higher in the central areas of large towns also supports this view. On the other hand elderly people attend a hospital "casualty" department without a reference from their doctor relatively infrequently because they are more likely to have accidents at home and can expect their general practitioner to visit them there.

33. The diagnostic material provided by the survey shows in some detail what kind of patients are at present seen in hospital "casualty" departments, and also enables a broad distinction to be drawn between injured patients whose conditions are the result of accidents and those requiring treatment for medical or surgical conditions arising otherwise. Some distinction between serious and trivial cases can be drawn on the basis of the way the patient arrived in the "casualty" department—whether, for example, by ambulance, or of his own volition—or on the basis of his further treatment—for example whether he should attend the "casualty" department again or whether he should be taken in as an in-patient.

34. Of all new patients seen in the survey week 63,000 (61 per cent) were injury cases, such cases being defined as those in one of the seven diagnostic classes of multiple injuries, bruise, sprain, fracture, dislocation, wound and burn. Patients with sepsis accounted for 6 per cent and those with foreign bodies in the eye, ear, etc. for 11 per cent. Of the remaining patients 17 per cent were reported as in one of the diagnostic classes "other surgical" or "other medical". These proportions appear to be fairly uniform throughout the country: figures for the proportion of injuries of 74 per cent for the Manchester town area, 71 per cent for the Birmingham town area and 52 per cent for Greater London were among the few marked variations which were observed.

35. The following table gives the detailed diagnostic distribution of new patients with injuries as defined above.

TABLE 1

Number of new patients and percentage distribution: Classified according to injury diagnostic class

	New patients	
	Number	Per cent
All new patients: Total	104,660	100
New patients with injuries: Total	63,458	61
Multiple injuries	1,788	2
Bruise	10,600	10
Sprain	11,726	11
Fracture...	10,961	11
Dislocation	900	1
Wound	24,878	24
Burn	2,605	2

36. There were some interesting differences between these classes of patient, in the ways in which they came to seek treatment and in the kinds of treatment prescribed. 74 per cent of the patients with multiple injuries reached the "casualty" department, on their first attendance, by ambulance or other transport, and nearly half (49 per cent) of them were prescribed in-patient treatment or were referred to another hospital. These patients with multiple injuries were clearly the most serious type of case, but they were not very numerous, accounting for only 2 per cent of all new patients. 30 per cent of the patients with fractures reached hospital by ambulance or other transport, 19 per cent were

prescribed in-patient treatment or were referred to another hospital and, as was to be expected, almost all needed further hospital treatment of some kind. For each of the other types of injury identified in the survey classification, except sprains, the proportion of patients arriving by ambulance or other transport was high. Among patients classified as having bruises or wounds more than a fifth were dismissed as requiring no further treatment and most of the rest were advised to return for further treatment either to the "casualty" or to an out-patient department. It is possible that in the case of many bruises, wounds and sprains the function of the hospital "casualty" department is mainly one of diagnosis, many patients being discharged after X-ray.

37. New patients coming under the heading "foreign body" mostly had eye injuries, in many cases capable of being cleared up with one attendance in the "casualty" department. If they needed further treatment this was in most cases prescribed to be given in the "casualty" or out-patient department. More than two thirds of all patients with "foreign body" conditions arrived of their own volition and fewer than 1 in 10 by ambulance or other transport.

38. The survey provides information about the grades of medical staff actually seeing patients in the "casualty" department as distinct from those whose duties were confined to supervision, real or nominal, of the work of the more junior doctors. Classifying patients according to the most senior doctor who saw them, the following table sets out the findings of the enquiry.

TABLE 2

Number of new patients and percentage distribution: Classified according to the grade of staff who saw them at the " casualty " department (1)

Staff seeing patients	New patients seen	
	Number (2)	Per cent
All staff: Total	104,660	100
Medical Staff		
House Officer	24,297	23
Senior House Officer	35,480 (596)	34
J.H.M.O.	9,916 (174)	9
Registrar	8,473 (1,165)	8
Senior Registrar	1,042 (296)	1
S.H.M.O. or equivalent	7,689 (522)	7
Consultant	1,582 (558)	2
General Practitioner	7,533 (145)	7
Non-medical staff	8,184	8
Status of staff not known	464	1

(1) Patients are classified according to the most senior grade of doctor who saw them. For this purpose a General Practitioner has been regarded as being between the grades of Registrar and Senior Registrar.

(2) The figures in brackets represent patients, included in the unbracketed figures alongside, who were also seen by a doctor in a more junior grade.

39. Of the 104,660 new patients, only 2 per cent were seen by a consultant and 7 per cent by an S.H.M.O. or equivalent grade. The great majority were seen by junior staff only—23 per cent by a house officer and 34 per cent by a Senior House Officer—and 8 per cent were not seen by a doctor at all. The proportion of new patients seen by junior staff only was greater in the teaching hospitals: for the aggregate of all such hospitals 73 per cent were seen by a house officer or Senior House Officer only. There were, however, large differences between individual hospitals in both the teaching and non-teaching groups. It is possible to find, for example, among the hospitals with large "casualty" departments, a London teaching hospital in which 95 per cent of new patients were seen by a house officer only, a provincial teaching hospital in which 98 per cent were seen by a house officer or a Senior House Officer only and two non-teaching hospitals in each of which the proportion seen by a house officer or Senior House Officer only was over 90 per cent.

40. About a third of the patients seen by a consultant were also seen by a more junior doctor, and the proportion was about the same for those seen by a Senior Registrar. For other cases the proportion seen by more than one grade of doctor was of little numerical significance.

41. The survey provides no evidence that there is selection of higher grades of staff to see patients with particular kinds of injury or other condition, or to see patients arriving by different means (e.g. by ambulance or other transport, referred by general practitioner, on own volition). As the diagnostic classification did not indicate directly the degree of severity of the cases seen we have taken into account in judging severity the relationship between diagnostic information and source or disposal of patient, e.g. patients arriving by ambulance or patients prescribed in-patient treatment. By this means we have distingushed indirectly, in a number of different ways, between classes of case which will include high proportions of seriously injured patients, and others which will include mainly patients with minor conditions. In whatever way we examine the problem the evidence suggests that in many hospitals there is at present no provision for the most seriously injured patients arriving in the "casualty" department to be seen immediately on arrival by senior doctors.

42. The survey also provides some indications of the contribution which general practitioners make to the running of the hospital casualty services. Altogether 7 per cent of new patients were seen by general practitioners. As is to be expected, the proportion was lower for the teaching hospitals (2 per cent) than for Regional Hospital Board hospitals (8 per cent), and among the latter it was comparatively low for the Metropolitan Regional Hospital Boards and exceptionally high in the non-teaching hospitals in the Leeds, South Western and Welsh regions (20%, 18% and 14% respectively). For the group of hospitals with "casualty" departments in which fewer than 100 new patients were seen in the survey week a quarter of all new patients were seen by general practitioners.

43. The general picture of the size and type of the hospitals which have "casualty" departments can be seen from Table 3.

TABLE 3

Total number of hospitals and number of hospitals having " casualty " departments: Classified according to type and size of hospital

Number

	Size of hospital (number of staffed beds)					
	All sizes	0–25 beds	26–50 beds	51–100 beds	101–250 beds	Over 250 beds
All types of hospital						
Total	2644	515	567	532	549	481
With " casualty " depts. ...	789	150	150	120	191	178
Acute hospitals						
Total	739	163	169	117	163	127
With " casualty " depts. ...	608	135	125	95	147	106
Mainly or partly acute hospitals						
Total	176	6	4	17	49	100
With " casualty " depts. ...	82	3	3	1	15	60
Children's acute hospitals						
Total	43	3	5	18	12	5
With " casualty " depts. ...	26	—	2	10	9	5
Eye hospitals						
Total	20	3	6	6	4	1
With " casualty " depts. ...	19	3	6	5	4	1
Other hospitals						
Total	1666	340	383	374	321	248
With " casualty " depts. ...	54	9	14	9	16	6

44. The majority of acute hospitals, almost all of the eye hospitals and about half of the mainly or partly acute and of the children's acute hospitals had "casualty" departments. Among the 1,666 hospitals of other types 54 had "casualty" departments and of these, 10 were long-stay and 8 were orthopaedic hospitals. Among the acute hospitals the proportion with "casualty" departments was not noticeably different for hospitals of different sizes.

45. As we are concerned with the organisation of an accident and emergency service it is necessary, as far as is possible from the survey data, to distinguish those seriously injured patients who should properly be the responsibility of such a service from the large number of other patients who are at present treated in hospital "casualty" departments. Table 4 sets out the hospitals with "casualty" departments by size of "casualty" department (in terms of numbers of new patients seen in the survey week) and size of hospital, and Table 5 shows how the numbers of new patients seen (both in total and separately for "seriously injured" patients) were distributed between small and large "casualty" departments. For this present purpose a new patient was counted as "seriously injured" if he came within the group of diagnostic classes used above to distinguish injury cases, and if in addition he was prescribed in-patient treatment, or if he was referred for consultant opinion to the out-patient department, or if he was referred to another hospital. It was thought that such a rule-of-thumb definition would give useful indications of the size of the problem with which the accident

and emergency service would have to deal, and would permit comparisons to be made between hospitals and "casualty" departments of different sizes, although clearly such a classification will involve a number of individual patients being mis-classified.

TABLE 4

Number of hospitals having "casualty" departments: Classified according to size of "casualty" department and size of hospital

Number

Size of "casualty" department (number of new patients seen in survey week)	Size of hospital (number of staffed beds)					
	All sizes	0–25 beds	26–50 beds	51–100 beds	101–250 beds	Over 250 beds
All sizes: Total	789	150	150	120	191	178
Under 100 patients	467	147	138	73	63	46
100—199 "	140	1	9	44	50	36
200—299 "	80	1	3	3	44	29
300—399 "	47	—	—	—	23	24
400—499 "	24	—	—	—	6	18
500 or more "	31	(1)1	—	—	5	25

(1) Public Dispensary and Hospital, Leeds.

TABLE 5

Number and average number per "casualty" department of all new patients and of "seriously injured" new patients: Classified according to size of "casualty" department

Size of "casualty" department (number of new patients seen in survey week)	All new patients		"Seriously injured" new patients (1)	
	Number	Average number per "casualty" department	Number	Average number per "casualty" department
All sizes: Total	104,660	133	12,267	15·5
Under 100 patients	16,740	36	2,077	4·4
100—199 "	19,953	143	2,085	14·9
200—299 "	19,321	242	2,163	27·0
300—399 "	16,727	356	1,753	37·3
400—499 "	10,645	444	1,522	63·4
500 or more "	21,274	686	2,667	86·0

(1) Patients in one of the seven diagnostic classes, multiple injuries, bruise, sprain, fracture, dislocation, wound and burn, who were prescribed in-patient treatment or who were referred for consultant opinion to the out-patient department of the hospital or who were referred to another hospital.

46. There were 467 hospitals each of which saw fewer than 100 new patients in their "casualty" departments in the survey week. For these hospitals the average number of new "seriously injured" patients per hospital was only 4·4, although in total these hospitals dealt with about 16 per cent of all new patients seen in "casualty" departments. "Seriously injured" patients averaged 14·9 per hospital for the 140 hospitals each of which saw between 100 and 199 new patients in the survey week.

47. In order to examine more closely the distribution of hospitals according to number of "seriously injured" patients and size of "casualty" department the figures in Table 6 have been produced.

TABLE 6

Number of hospitals having " casualty " departments: Classified according to number of " seriously injured " new patients seen and size of " casualty " department

Number

Number of " seriously injured " new patients seen in " casualty " department (1)	Size of " casualty " department (number of new patients seen in survey week)			
	All sizes	Under 100 patients	101–199 patients	200 or more patients
All numbers of patients: Total	789	467	140	182
0 ,,	93	88	2	3
1 ,,	85	81	4	—
2 ,,	64	62	2	—
3 ,,	53	44	8	1
4 ,,	33	32	1	—
5 ,,	36	30	5	1
6 ,,	27	19	8	—
7 ,,	31	22	5	4
8 ,,	20	11	7	2
9 ,,	26	16	9	1
10–14 ,,	79	31	33	15
15–19 ,,	53	16	17	20
20–29 ,,	80	15	26	39
30 or more ,,	109	—	13	96

(1) Patients in one of the seven diagnostic classes, multiple injuries, bruise, sprain, fracture, dislocation, wound and burn, who were prescribed in-patient treatment or who were referred for consultant opinion to the out-patient department of the hospital or who were referred to another hospital.

48. Altogether 422 hospitals each saw 7 or fewer "seriously injured" patients in the week—in fact 93 saw none at all. Among the 467 hospitals each dealing with fewer than 100 new patients in its "casualty" department, 378 saw 7 or fewer "seriously injured" patients. Most of these 378 hospitals were small, 136 of them having 25 or fewer beds, 129 having between 26 and 50 beds and 52 having between 51 and 100 beds.

49. Information was also obtained in the survey about the availability, to hospitals with "casualty" departments, of fracture clinics and septic hand clinics. Table 7 indicates the position for hospitals with "casualty" departments of different sizes.

TABLE 7

Number of hospitals having (a) a fracture clinic and (b) a septic hand clinic in their own or in an associated hospital: Classified according to size of "casualty" department

Number

Size of "casualty department" (number of new patients seen in survey week)	All hospitals	Hospitals with	
		Fracture clinic (1)	Septic hand clinic (1)
All "casualty" depts.: Total ...	789	535	125
Under 100 patients	467	242	51
100–199 "	140	124	19
200–299 "	80	72	14
300–399 "	47	44	16
400–499 "	24	24	11
500 or more "	31	29	14

(1) In their own or in an associated hospital. Several hospitals may be served by the same clinic.

50. In all, 535 of the 789 hospitals had fracture clinics located in their own or an associated hospital. Most of those without such clinics were among the 467 with "casualty" departments each dealing with under 100 new patients but, even for this group, more than half had fracture clinics in their own or in an associated hospital. By contrast only 125 of the hospitals in the survey had septic hand clinics in their own or in an associated hospital. Those without such clinics included hospitals with both large and small "casualty" departments.

THE PRESENT IN-PATIENT CASE LOAD

51. The Hospital In-Patient Enquiry, organised jointly by the Ministry of Health and the General Register Office, has since 1955 collected information, on the basis of a sample, on discharges (this term includes deaths) from all National Health Service hospitals (other than psychiatric and convalescent hospitals) in England and Wales. The objective was to cover a random sample of 10 per cent of discharges and this coverage was virtually attained by 1958. Although strictly related to discharges, for injury conditions the data approximate closely to admissions since the length of stay in such cases is usually short. Furthermore, as the data strictly relate to spells of treatment, a patient transferred from one hospital to another could be included twice in the sample for the same condition. For injured patients the type of injury is recorded but not the cause.

52. From the sample, estimates can be made of the total number of spells of treatment for different conditions and the rates per 10,000 population. Figures relating to injuries and all conditions for 1958 and 1959 are given in Table 1 of Appendix 3. The more detailed figures given in Tables 2 and 3 of Appendix 3 provide a useful guide to the hospital in-patient facilities required for injured persons. From these figures it would seem that an accident and

emergency service for a population of about 500,000 would have to provide in-patient treatment for some 3,000 patients per year. Table 2 provides a guide to the numbers of different types of injury which might be expected and, for example, shows that some 300 cases of fractured femur and some 100 cases of fractured skull would require in-patient treatment. From this table, and the more detailed information on age structure contained in Table 3, the need for close co-ordination between special units can be appreciated; the number of beds required in the accident and emergency service of a particular area will depend to a great extent on the degree of association of those specialist services.

53. The figure of 23,310 discharges of persons suffering from the effects of poisons points to the need for the designation of one hospital within a given area as the preferred receiving centre for cases of poisoning, as recommended by the Sub-Committee of the Standing Medical Advisory Committee on the emergency treatment in hospital of cases of acute poisoning.* These receiving centres should, we think, normally be located in accident and emergency units.

54. In view of the differing estimates of the need we thought it wise to study the actual number of beds now in use for the treatment of injuries. From the Hospital In-Patient Enquiry data it is estimated that, in 1957, there were 68,600 admissions for head injury, staying an average of 7·9 days, and 193,700 admissions for other injuries staying 19·5 days. At 100 per cent bed occupancy this number of admissions would require 26.4 beds per 100,000 population. If the calculation is based on an average bed occupancy of 80 per cent, since it is impossible to achieve a higher figure over the whole year because of the irregular incidence of accidents, this gives a requirement of 33 beds per 100,000 population, including beds for head injuries and severe soft tissue injuries and beds for long-stay and geriatric cases.

55. As might be expected, however, the number of beds required varies according to age and sex. The following table shows the requirements for head and other injuries for children and adults of each sex:—

TABLE 8

Beds required per 100,000 persons in given age and sex groups at 80% occupancy: Classified according to head injuries and other injuries

	Per 100,000 children under 15			Per 100,000 adults			Per 100,000 persons of all ages		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Head Injuries	5·4	2·4	3·9	6·4	2·2	4·1	6·2	2·2	4·1
Other ,,	26·4	14·8	20·7	33·3	30·1	31·7	31·6	26·8	28·9
All ,,	31·8	17·2	24·6	39·7	32·2	35·8	37·8	29·0	33·0

It will be seen that some 30 per cent more beds for males are required than for females.

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*Emergency Treatment in Hospital of Cases of Acute Poisoning, H.M. Stationery Office, 1962, price 1s. 6d.

56. It is not possible to exclude geriatric and other long-stay cases direct, but separate figures are available for patients over 65 years of age. While these patients stayed little longer than younger patients for head injury, they stayed considerably longer for other injuries, as is shown in the following table:—

TABLE 9

Average duration of stay in days for patients with " other " (i.e. not " head ") injuries: Classified according to sex for age groups 45—64 and 65 and over

	Patients aged 45—64	Patients aged 65 and over
Male	19	29
Females	19	41

57. If it is assumed that the higher average length of stay among patients over 65, compared with patients of 45—64, was on account of age, and if provision is made for the transfer of these older patients, where necessary, to geriatric units when the acute phase of their own treatment is completed, the number of beds required for adult injury cases would be reduced and the total number of beds required for the injured would then be as set out in the following table:—

TABLE 10

Beds required per 100,000 persons in given age and sex groups at 80% occupancy, after removal of long-stay older patients: Classified according to head injuries and other injuries

	Per 100,000 Children under 15			Per 100,000 adults			Per 100,000 persons of all agess		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Head injuries	5·4	2·4	3·9	6·4	2·2	4·1	6·2	2·2	4·1
Other ,,	26·4	14·8	20·7	31·2	19·0	24·8	30·1	18·1	23·8
All ,,	31·8	17·2	24·6	37·6	21·2	28·9	36·3	20·3	27·9

IV THE FUNCTION AND ORGANISATION OF AN ACCIDENT AND EMERGENCY UNIT

58. The word "casualty", in its proper meaning of a serious injury, has a long history. It occurs in Shakespeare, and Dickens, writing in 1837, used "casualty ward" to describe the ward in a hospital in which accidents were treated. Unfortunately the meaning altered in the second half of the last century. The Nuffield Report "Casualty Services and their Setting" gives an interesting quotation from a survey made by the Lancet in 1869. The out-patients at St. Bartholomew's Hospital are, it says, divided into two categories. "They are the "casualty" which comprises those who are supposed to require temporary treatment for diseases or injuries of a trifling character, and the "out-patients" properly so called who, after receiving a regular letter of admission, are entitled to the advice of the assistant surgeons and physicians for a period of 2 months. It is in the casualty division that the increase of numbers has been most marked...

......It is estimated that not less than a thousand patients frequently attend on a Monday or Tuesday morning". The explanation of the change is no doubt that those needing emergency treatment had to be exempted from the formalities of acceptance as regular out-patients, and others with less urgent needs took advantage of this easy way of access to the hospital. The modern counterpart of this—attendance at the "casualty" department to avoid the need of obtaining an appointment at the out-patient department—is not unknown.

59. Thus the term "casualty patient" came into use to distinguish those not recommended by a subscriber, but the distinction was not precise, nor was "casualty" restricted to its common association with injury or sudden illness, for it came to cover "casual" attenders not referred by a doctor and not requiring urgent attention. "Casualty" patients thus included both those too urgent and those too trivial to be referred to the consultative out-patient department at its limited hours. Some hospitals took pride in their "open door" policy, accepting patients from any source at any time. The hours of work and the trivial nature of many cases usually entailed reliance on relatively unsupervised junior medical staff.

60. Although restriction to emergency work or "true casualties" was recommended in 1912 by a King Edward's Hospital Fund Committee, little change could be expected until general medical services became universally available in 1948. Even then few hospitals changed their policy. In many "casualty" departments, particularly those in large central hospitals in urban areas, the pattern of work is still based on pre-1948 conditions when many patients who could not afford a family doctor attended for minor illnesses at the hospital (Fry, 1960*). Under these conditions, the "general practice" type of case seen may total between 40% and 60% of casualty patients (Crombie, 1959†, Fry, 1960). Many of the inter-linked problems of "casualty" departments, from supervision and staffing to out-dated physical conditions, equipment and methods, arise from the triviality of many of the conditions treated.

61. The increasing number and severity of accidents make it essential to improve services for those requiring immediate examination and treatment. Similar streamlined services are required for a relatively small number of emergency illnesses. "Casualty", in its traditional usage in the hospital vocabulary, is thus too loose a term. In ordinary speech, on the other hand, its meaning is too narrow, being usually confined to injuries and excluding the other kinds of medical and surgical emergency. We therefore recommend the abandonment of the word "casualty" as the description of any type of hospital service, department, officer or patient. We have accordingly asked the Standing Medical Advisory Committee to agree to our changing our title and terms of reference to refer to the Accident and Emergency Services instead of the Casualty and Accident Services. The main objection to the word "casualty" is that it tends to perpetuate the tradition of casual attendance by patients who are not in urgent need of hospital treatment but wish to avoid the trouble of attending their general practitioner's surgery or making an appointment at the out-patient department.

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*Fry, L. (1960) Lancet 1, 163.

†Crombie, D. L. (1959) Journal of College of General Practitioners No. 25

These patients swamp many departments to the detriment of those who really do require urgent treatment. Apart from this direct effect on the standard of treatment given in the department there is an important indirect effect, in that consultants and junior medical staff of good quality will be reluctant to work in a department in which much of the work does not give proper scope for their talents.

62. We do not suggest that "casualty" departments should be re-named simply "accident departments". This suggestion is attractive for its simplicity, and the name would certainly be effective in deterring the casual attender. It would, however, be likely to lead to confusion in the minds of general practitioners, ambulance crews and the general public. The patient who collapses in the street, for example, and is not the victim of an accident in the usual sense would properly be received in the accident and emergency department as an undiagnosed emergency case. After careful consideration of the alternatives, therefore, we recommend that what is now known as the casualty service should in future be called the "Accident and Emergency Service", and corresponding changes should be made in the description of casualty departments, casualty officers and casualty patients. "Accident" is put before "emergency" because the number of accident cases is far greater than the number of other emergency cases reaching the department. It is misleading to think of accidents and emergencies as two streams; one is a river and the other a trickle.

63. By far the most important function of an accident and emergency department is to deal with injured patients in urgent need of skilled hospital treatment at any time of the day or night. The staffing, design and equipment of the department must be planned for this purpose. Ideally there should be separate provision for receiving other urgent cases such as poisoning, acute (medical) conditions and non-traumatic surgical emergencies. This could be associated with the accident department but should be under separate control. In practice, however, it would be impossible to achieve this ideal. When an ambulance is called to take an unconscious patient to hospital the ambulance crew cannot be expected to diagnose his condition and decide which of several hospital departments receiving emergency cases is the appropriate one to receive him. An accident and emergency department must therefore include a reception unit for all undiagnosed emergency cases.

64. It follows that the department must be designed to allow patients to be brought in direct from the street, seen at once and treated by an experienced doctor or passed on without delay for the appropriate treatment. This means having separate entrances for stretcher cases, with easy access for ambulances, and for walking cases. Patients would be "sorted" by a member of the staff of the accident and emergency department, who would refer them at once to the accident and emergency department (which must be immediately adjacent) or to the other hospital departments as might be necessary. To avoid crowding the department and so impeding the movement of urgent cases patients returning for further treatment by the accident service should not enter through the reception area, but should go direct to the appropriate clinic. To get a proper flow of patients an adequate building is necessary, and many of the present so-called casualty departments are extremely unsatisfactory in this respect.

Much building work will be required if even the reduced number of accident and emergency units we propose are to be properly accommodated. We do not propose to make detailed recommendations about the design of an accident and emergency unit, which will vary from hospital to hospital. We were able to see and comment on two successive drafts of the Hospital Building Note to be published on the subject by the Ministry of Health, and were glad to find that the general principles followed were in accordance with our own views.

65. Without prejudice to the department's primary function of receiving and treating accident and emergency cases, some separate provision must be made, at least for the time being, to deal with patients suffering from minor non-traumatic conditions, the number varying greatly with the location of the hospital. In the larger cities, where people work many miles away from their homes, and again in holiday resorts, some separate provision must be made, not necessarily at a hospital which has an accident and emergency unit, for patients suffering from conditions of this kind who cannot see their general practitioners. The accommodation and equipment should be that required for treatment of the kind given by a general practitioner in his surgery. Even when the general practitioner lives close at hand he may be out on his rounds when he is needed, and attendance at the hospital may therefore be justified. With the increase in group practices in which one practitioner is always available for emergency calls there should be a steady reduction in the numbers of patients attending hospitals simply because they cannot see their own doctors, but there will always be some patients of this kind at some hospitals, despite all the efforts of general practitioners and hospital staff to discourage them. The important thing is to ensure that their presence does not interfere with the treatment of serious emergency cases, either physically by crowding the department or by occupying the time of the medical and nursing staff.

66. Apart from the treatment of injured patients, accident and emergency units can help to prevent injuries by giving outside bodies such as the police, Public Health Departments of local authorities and factory managements information about frequent causes of accidents. This will involve producing accurate and comprehensive analyses of cases treated by the accident and emergency unit, and in our view it should be made a duty of these units to make such analyses, if possible using a standard record form. Comprehensive and accurate clinical records should be kept in all accident and emergency units, and the responsibility for seeing that this is done should lie with the consultant in charge.

67. We are strongly of the opinion that all injured patients requiring hospital treatment should be taken direct to hospitals having departments of the kind described in the previous chapter, which should be staffed and equipped to deal immediately with major injuries and other emergency cases at any time of the day or night. We realise that much education of the public, and consultation with representatives of general practitioners and ambulance authorities, will be needed before it is generally accepted that a patient in urgent need of treatment should not be taken to the nearest hospital if it has not a department of this kind. It is normally better for such a patient to have a longer ambulance journey

to an Accident and Emergency Centre than to go to the nearest hospital, which may have no resident medical staff and be able to give only first aid treatment before sending the patient on to a larger hospital.

68. The need for an Accident and Emergency Centre to be adequately staffed 7 days a week and 24 hours a day imposes a lower limit on the size of the centre, the hospital at which it is situated and the population it should serve. In Chapter 3 we quoted the recommendation of the Accident Services Review Committee that an accident unit should not have less than 25 beds. In our view this figure is too low to justify an adequate level of medical staffing at night and over the week-end, and we suggest that the minimum should normally be 50 beds. We are not prepared to suggest an upper limit of beds for a major centre serving a large area; the number will be determined by the size of the population, geographical considerations and the existence of other hospitals serving the area. In the largest cities, therefore, Regional Hospital Boards and Boards of Governors would have to consider whether each major acute hospital, teaching or non-teaching, should have an accident and emergency unit, and how the population is to be zoned between the units.

69. At some hospitals not designated as accident and emergency centres there should be provision for the treatment of minor injuries. These hospitals may also be able to receive patients after their primary treatment at the major accident and emergency centre. Their work should be supervised by the consultants at the major centre.

70. Various estimates have been given of the number of accident beds required per 100,000 population. The original advice* given by the Ministry of Health to Regional Hospital Boards in 1948 put the total requirements for traumatic and orthopaedic surgery at 40 acute beds and at least as many long-stay beds for a population of 100,000 to 120,000. This of course included beds for elective surgery and other planned as opposed to emergency admissions. We have seen that the British Orthopaedic Association in its 1959 Memorandum on Accident Services recommended 150—250 accident beds per ½ million population, or 30—50 per 100,000, including beds for such conditions as head injuries and severe soft tissue injuries, while the Accident Services Review Committee's figure of 25 per 100,000 population excluded these special beds. We saw in Chapter 3 that the present number of beds occupied by the injured, ignoring any increase since 1957, amounts to nearly 30 per 100,000 population if we exclude those elderly patients who remain in hospital after the acute phase of treatment of their injury is over, and who could be transferred to associated geriatric beds outside the accident centre itself.

71. We recommend that, allowing for the continuing rise in the accident rate, the ratio of between 30 and 35 accident beds per 100,000 population, to be included in the 330 acute beds proposed for this population in "A Hospital Plan for England and Wales",** should normally be used for planning, provided that the beds are supplemented by an adequate number of associated geriatric beds. These associated beds must be under the supervision of the surgeon who gave

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*Memorandum R.H.B. (48)1, Paragraph 163.

**H.M. Stationery Office, 1962, price 18s. 6d.

the acute treatment, and should have fuller facilities for rehabilitation than the acute hospital. The exact number of accident and emergency beds required per 100,000 population will vary with local conditions such as the type of industry, numbers of road accidents and age structure of the population, and will also depend on the provision of rehabilitation beds for patients too young to go to the geriatric unit. Where beds of this type are provided they also should be under the continued supervision of the surgeon. It will be seen that the hospital in-patient enquiry figures show a much larger bed requirement for males than for females (36·3 per 100,000 population against 20·3). The ratio between the sexes will vary at different times, so that the planning of accident and emergency units should allow beds to be used for either sex.

72. The concept of accident and emergency units with consultant and resident staff sufficient to provide a 24 hour service for the immediate treatment of all injuries fits in well with the policy of concentrating the hospital service on the "district general hospital", as set out in "A Hospital Plan for England and Wales".

73. A unit of the minimum size we have suggested, 50 beds, would serve a population of some 150,000, and there are, we believe, very few areas of England and Wales where distances are so great and transport so difficult that a single unit could not provide an efficient service for such a population.

74. We note that the consensus of opinion in the evidence we received and the relevant reports is unfavourable to special accident hospitals. We agree with this as a general policy, on the ground that it is better for accident patients to have available to them the full range of services provided at a general hospital.

75. The 30—35 beds recommended per 100,000 population include beds such as those for head injuries and severe soft tissue injuries. The Accident Services Review Committee estimate the requirements for special accident beds at the acute stage per million population at 10 for neurosurgery, 5 for plastic surgery and 5 for thoracic surgery. The professional Associations in these specialties were represented on the Review Committee, and we have no reason to doubt that these estimates are the best that can be made, though requirements will obviously vary with local variations in the type of accident predominating. These estimates do not exclude the need for beds for traumatic cases in the special centres for neuro surgery and plastic surgery. Besides these, and the geriatric beds already mentioned, small numbers of thoracic surgery beds will be required in the accident service, or in special centres supporting it, and perhaps other special departments such as genito-urinary surgery and psychiatry.

76. So far as psychiatry is concerned, we agree with the view expressed by the Royal Medico-Psychological Association in their evidence that each large general hospital with a busy accident department should have emergency beds for psychiatric patients. One important use of these beds has recently been given emphasis by the passing of the Suicide Act, 1961. Under this Act attempted suicide is no longer a crime, and the law can no longer be relied upon as a means of seeing that any necessary medical or social help is given. It is estimated that there are some 30,000 cases of attempted suicide a year, and many of them

come to hospital accident departments. We endorse the advice given to hospital authorities by the Minister* that all such patients should receive psychiatric investigation before discharge. In the future large general hospitals having accident and emergency units will also normally have an acute psychiatric unit, but until this can be achieved, psychiatrists from other hospitals should be available quickly for consultation by the staff of the accident and emergency unit, and it should be possible to admit patients requiring in-patient psychiatric treatment or observation.

77. It has been suggested that the special services such as neurosurgery, plastic and thoracic surgery should be provided at "central" or "major" accident units, each of which should serve a number of ordinary accident units and exercise a certain amount of control over them. Thus the Review Committee recommends that a Central Accident Unit, apart from providing the special services, should "act as a co-ordinating body for accident arrangements for the Region and offer support and guidance." It might thus constitute a third tier in the organisation, above the ordinary accident units and the units at small hospitals treating only minor accidents. In our view administrative control of the ordinary accident units is not necessary. The accident unit must be able to obtain the special services from Regional or Sub-Regional centres for the specialty. It is desirable, but in many cases may not be possible, for the centres in the different specialites to be at the same hospital. The neurosurgical unit serving a Region or part of a Region, for example, can quite well be at one hospital and the plastic unit serving the same area at another hospital. Nor is there any need for the hospitals at which the special centres are located to co-ordinate the accident arrangements in the area. It is, however, their duty to give support and guidance where necessary to other accident and emergency units, though each particular specialty must be available to give advice to the units.

It is for Regional Hospital Boards to organise a clinically integrated service, with a clearly defined function for each special centre, accident and emergency unit and smaller hospitals receiving only the less serious cases. The special centres would accept cases after they had been given immediate treatment at the accident unit. Where it was not necessary, or not possible without danger, to transfer the patient to the special centre, advice could be given over the telephone, or if necessary consultants from the special centre could attend patients at the accident unit.

78. The development of mechanical procedures for the treatment of anuria, respiratory failure and cardiac arrest has made possible newer methods of therapy for complications which may accompany certain accidents. These methods require expensive equipment and a well trained team of experts, medical, nursing and technical. Sixty-three cases of anuria following trauma were admitted to artificial kidney units in Great Britain and Northern Ireland during 1960. During the Korean War it is estimated that 1 in 200 of the battle casualties surviving 48 hours after injury developed acute renal failure. It would appear that the number of cases referred to the artificial kidney units during 1960 does not represent all the cases likely to require such therapy. 80,000 persons suffered severe traumatic injuries during 1960 and, assuming that half

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*In Memorandum HM(61)94.

the cases of acute renal failure might require the use of an artificial kidney, provision would be necessary for 200 cases. The artificial kidney is, however, used in the treatment of other emergencies and experience during recent years would suggest that only a fifth of the cases referred to artificial kidney units are primarily traumatic in origin. It would thus seem in the light of present experience that there would only be the need for at most one centre per region and in certain cases it might be advisable for regions to combine. The siting of such units would be determined by regional requirements and they could conveniently be in the same hospital as the major accident centre.

79. Certain of the major accident and emergency centres should be designated as burns centres for children and for adults.

80. In this report we have envisaged major accident centres as integrated units of general hospitals presenting a wide range of specialist and ancillary skills and serving substantial catchment areas. It is inevitable that in the future there will be fewer hospitals designated to deal with injured persons as compared with the past. In this respect the effect of our recommendations will be in harmony with the rationalisation measures embodied in the Hospital Plan for England and Wales. We have, however, not overlooked the contribution made to the care of the injured by special hospitals and special centres. In the former category are those few large orthopaedic hospitals to which injured patients have been admitted in considerable numbers for some years past—either directly or by transfer after preliminary treatment in associated general hospitals. This applies more particularly to those major injuries requiring a longer period of hospitalisation than the average, with a special need for rehabilitation and in some cases for reconstructive surgery. Of the special centres we note the importance of the paraplegic units where without delay the vital decision can be made whether or not to explore the spinal canal in a spinal fracture complicated by neural damage. The plastic centres also are available to take some of the in-patient load, and their dominant role in the treatment of burns is part of the modern pattern of the organisation of surgical services. Maxillo-facial units have an important part to play in the treatment of jaw injuries.

81. In regard to rehabilitation it is a surgical commonplace to say that this aspect of the welfare of an injured person should always influence the therapeutic programme from the day the patient enters the ward or ambulatory clinic. When medical reablement measures within the scope of the organised accident services have reached the end of their usefulness the facilities in the field of industrial rehabilitation can only be invoked if there is close and continuous co-operation with all agencies outside the hospital service concerned with the resettlement of injured men and women in their former occupations or in their training for new types of work.

V THE STAFFING OF ACCIDENT AND EMERGENCY UNITS

82. It will be recalled that the Joint Working Party on the Medical Staffing Structure in the Hospital Service laid down as a general principle "All patients in the Hospital Service should be in the charge of consultants, and consultants in the specialty or specialties involved in the treatment of each patient should bear

the responsibility for his ease and the medical work required for him." Junior medical staff should be given explicit instructions about the need to seek advice on the treatment of patients with major injuries, from the consultant on emergency call.

83. Our survey of the work of "casualty" departments (Chapter 3) provided the first accurate information about the types of medical staff actually dealing with patients, as opposed to those whose duties were confined to supervision, real or nominal, of the work of more junior doctors. The figures are striking. Of the new patients seen in the "casualty" departments of this country during the week of the survey 2 per cent were seen by a consultant, 7 per cent by a Senior Hospital Medical Officer (or equivalent), 7 per cent by a general practitioner, 8 per cent by a registrar, 9 per cent by a Junior Hospital Medical Officer, 34 per cent by a Senior House Officer, 23 per cent by a House Officer and 8 per cent not by a doctor at all. (The figures relate to the most senior officer seeing the patient; those seen by consultants, for example, would undoubtedly have been seen by junior staff first.) The proportion of patients seen only by junior staff was greatest in teaching hospitals. At one of those in London 95 per cent of new patients were seen only by a house officer, and at a provincial teaching hospital 98 per cent either by a house officer or a senior house officer. These high figures are no doubt to some extent the result of the high proportion of patients with minor injuries and illnesses attending of their own volition at these particular hospitals.

84. Nevertheless 58 per cent of new patients with multiple injuries, and 64 per cent of those arriving in an ambulance were seen by only a senior house officer or house officer. Similarly, of those who were detained as in-patients 59 per cent were seen in the casualty department only by a senior house officer or house officer. It should be remembered that these statistics relate to what happened in the casualty department only. No doubt those who were detained as in-patients were seen by more senior staff as soon as they reached the wards, and this was probably better for them than to be kept in the casualty department until the senior officer came there to examine them. Nor can it be assumed that junior staff *refused* admission in doubtful cases without consulting a senior officer. Even so, with all these qualifications in mind, we can hardly resist the conclusion that at many hospitals recently qualified staff when serving in the casualty department undertake responsibility which they would not have in the wards or out-patient clinics. The results of our survey bear out the conclusion of the Joint Working Party: "in our experience, the medical staffing of casualty departments is the least satisfactory feature in the present hospital staffing system."

85. There are two reasons for this state of affairs. First, the level of medical staffing of casualty departments inevitably reflects the standard of the work the staff have for the most part to perform. When most casualty patients have minor conditions which could be treated at a general practitioner's surgery (if such treatment was readily available) it would be unreasonable to expect a senior member of the hospital staff to treat them. If a house officer can deal with a high proportion of these patients satisfactorily, then a house officer is appointed as casualty officer, and the need to bring in more experienced staff

to deal with the remaining small proportion of more serious cases may be a question calling for a high degree of clinical acumen. The remedy is clearly to reduce the flow of minor cases, by providing an adequate general practitioner service at all times, and thus make the accident and emergency department a place where an experienced medical officer can work without the risk of wasting a high proportion of his time.

86. The second reason for excessive reliance on junior staff may be more difficult to overcome. It is the difficulty of recruiting experienced staff. Whereas the first reason—the triviality of much of the work—applies most of all to the teaching hospitals with a long "open-door" tradition, the shortage of suitable staff affects more seriously the non-teaching hospitals, especially those in unattractive areas away from the main hospital centres. Where at present there is no consultant in charge of the accident department the casualty officer has no "chief" to whom he is responsible. He is the only resident medical officer in this somewhat isolated position, and this factor adds to the difficulty of filling these posts. The establishment of a new grade with the generic title of "Medical Assistant", as recommended by the Joint Working Party, should help in the staffing of some accident and emergency units. They recommended also that the junior staff of an accident and emergency unit should be members of a team under the supervision of consultants who would have a definite and sufficient part of their time allotted to this work and would attend the department regularly. We fully endorse these recommendations and hope that no time will be lost in putting them into effect. In the meantime everything possible should be done to strengthen the staffing of the accident and emergency service by such measures as the increased use of general practitioners, about which we shall have something to say later in this chapter.

87. We have mentioned the need for real supervision by consultants of the work of the accident and emergency department. Informal enquiries made by the Ministry at our request showed that some Regional Hospital Boards have recently made a number of consultant appointments with contracts including definite duties in casualty departments. Over the country as a whole, however, formal arrangements of this kind are rare. In some regions the pattern is that where there are two or more orthopaedic surgeons at a hospital one or other of them is available to supervise the casualty department, at any rate during normal working hours. In other cases, however, we suspect that supervision is often little more than nominal. In our view adequate supervision by consultants is essential.

88. This does not mean that we favour the development of accident surgery as a specialty in its own right, or the appointment of consultants to work whole-time in accident and emergency departments. Accident surgery is unlikely to provide a satisfactory career for a consultant, and better results are likely to be obtained by appointing surgeons, either orthopaedic or general, whose duties include, but are not confined to, the treatment and supervision of accident and emergency cases. Where an effective accident and emergency service has been set up there should be no difficulty in getting suitable consultants to devote part of their time to it, though they will not do so in casualty departments that are overloaded with trivial cases.

89. We think that it is necessary to appoint one consultant to be in administrative charge of an accident department. It is clear from figures which have been put before us that by far the greatest part of accident work falls within the province of the orthopaedic surgeon. It is therefore normally the best arrangement for a senior orthopaedic surgeon to have day to day control of the accident and emergency department. His duties would include arranging the daily rotas of consultants, registrars and other medical staff, maintaining liaison with other specialist services and the supervising of clinical records. Questions of policy in the organisation of the service, as opposed to day to day administrative responsibility, should be decided by a small team representing each of the specialties directly concerned with the accident service. At a large centre providing the whole range of services this team would consist of an orthopaedic surgeon, general surgeon, neurosurgeon, plastic surgeon and dental surgeon, and perhaps others such as thoracic or genito-urinary surgeons who might be concerned in particular cases. Consultants in all these specialties should be available to the resident staff for consultation by telephone at any time. It is recognized that physicians often have an important contribution to make to the treatment of patients suffering from accidents and other emergencies, for example neurologists in cases of head injury and chest physicians in cases of chest injury. The planning of the accident and emergency service, therefore, should take this into account and make provision for it.

90. The improvement so badly needed in the medical staffing of the accident and emergency service must be achieved by a gradual effort on several fronts. At the top, consultant supervision must be made a reality by specific reference to this work in the consultants' contracts, which should include an allowance for the cover given by the consultant at night and at the weekend. To enable supervision to be given at all times there should be at an accident and emergency centre providing a 7-day 24-hour service at least three consultant surgeons, each giving a substantial part of his time to accident and emergency work. Of the three at least two, including the consultant in administrative charge, should be orthopaedic surgeons. The scale of provision of orthopaedic surgeons that we propose would be adequate to undertake the elective orthopaedic surgery for the population in addition to their duties in the accident and emergency unit. Similarly the special centres for neurosuregry, plastic and thoracic surgery should cover an area large enough to warrant the employment of three consultants. Each centre would serve a much wider area than that of the orthopaedic or surgical service of the accident unit. Dental consultants and general dental surgeons will be needed in proportion to the number of jaw and dental injuries; dental advice should be available to the resident staff when required. Adequate bed provision should be made for this purpose. Below the consultants there should be three officers of intermediate grade and an adequate number of senior house officers to give a service at all times of the day and night. Service in an accident and emergency department is a valuable part of the training not only of an orthopaedic surgeon, but of a general surgeon. Rotation of staff between accident and general surgical work is valuable, particularly at registrar level. This must not mean that surgical registrars do odd sessions in the accident unit, which is most undesirable; the rotation should consist in officers holding appointments for six months or a year first in one department and then in the other. The introduction of a career grade of "medical assistant" should allow some depart-

ments to be staffed by officers more experienced than the house officers and senior house officers now commonly holding casualty officer posts, especially at hospitals which are not major accident centres but will continue to receive considerable numbers of minor injuries. This process will be greatly assisted by an improvement in the standard of work required through the elimination of minor cases. Even when all these reforms have been introduced, however, the medical staffing may well still not be adequate to deal with the ever increasing number of accidents. However this may be, there is no doubt at all that special steps are needed in the years that must elapse before the reforms can take effect.

91. The primary tasks of general practitioners, as far as this service is concerned, is of course to organise arrangements for dealing with the minor accidents and medical emergencies which are recognised as being within their province at any time of the day or night. In this connection we welcome the recommendation made by the College of General Practitioners in their evidence that doctors in group practices should arrange a rota so that one is always ready to answer emergency calls. Where general practitioners serve on a sessional basis as part-time medical assistants in hospital accident departments these sessions also should if possible be shared by a number of doctors on a rota covering evenings and weekends as well as normal working hours. Whether or not this is possible it is clear that the general practitioner can make a real contribution to the staffing of the hospital accident service. His experience in dealing with every variety of patient, including the psychosomatic and the hypochondriac, makes him particularly fitted for sorting the casual attenders. Experience in some areas has shown that the presence of a general practitioner in a "casualty" department often leads to a striking reduction in the number of patients who attend the department for minor conditions as an alternative to waiting at their own doctor's surgery.

92. In rural areas the general practitioner carries a much greater share of responsibility for the accident services. Despite our view that major accidents should be taken direct to fully staffed and equipped accident units we recognise that, at any rate in remote areas, cottage hospitals may have to continue to give first aid treatment to major injuries and deal with minor injuries, many of which can develop into serious conditions if they are not given prompt and skilful treatment. An effective rota of general practitioners able to attend at short notice is essential if a cottage hospital is to be designated to receive even minor injuries at all times. It is important that these peripheral units should be properly supervised by consultants from the accident unit itself.

93. An adequate discussion of the problem of staffing the accident and emergency service is not possible without consideration of the training of doctors. As undergraduate medical education is not the responsibility of the Minister of Health we feel that it may not be proper for us to make recommendations on the subject to him. We think, however, that we can usefully welcome the view expressed by the Accident Services Review Committee that the medical student's few weeks' dressership in a casualty department, which is a common practice, is totally inadequate and should be replaced by intensive study of trauma for, as near as possible, a period of three months. The Review Committee adds that the student should work not only in the receiving room of the

accident unit but in its wards, out-patient, follow-up and rehabilitation departments, and recommends that medical schools should be asked to review their training in the treatment of trauma having regard both to the length of time spent on the work and to the amount and scope of the teaching given.

94. The post-graduate education of doctors is again a matter not within the scope of a committee set up to advise the Minister, but we think that at least six months of the training of all surgeons should be in an accident unit, and hospitals should be encouraged to make rotating appointments at registrar level for periods of two years, giving a wide variety of experience in general surgery, orthopaedic surgery and the specialist services such as thoracic, plastic and neurosurgery. Appointments on these lines are understood to have proved successful and popular. Consideration should also be given to the possibility of improving the training of general practitioners in the treatment of trauma, by refresher courses or training before entry into practice as a principal. All senior registrars in any branch of surgery should participate in the work of accident and emergency units by short periods of duty or longer periods in rotation.

95. The surgical staff of the accident and emergency department must be supported by anaesthetists, radiologists and pathologists of adequate seniority. One consultant in each of these specialties should be responsible for organising the service so that, for example, a senior house officer in anaesthetics is not called upon to do work beyond his competence. At least two consultant anaesthetists must be available for accident and emergency work. An adequate medical staff will not by itself produce an efficient accident and emergency unit; it must be supported by adequate nursing, radiographic, secretarial, clerical, reception, portering and other ancillary staff, in adequate numbers and adequately trained. The essential requirements of all these types of staff must be provided seven days a week and 24 hours a day. Without an efficient radiographic service at the hospital, for example, an accident department simply cannot function. There should be experienced senior trained nursing staff responsible for the department throughout the 24 hours, in addition to adequate supporting trained and other nursing staff in the wards and reception unit of the department. Where the supporting staff are inadequate, hard-pressed doctors and nurses will have to spend much of their time in duties which are a waste of their professional skills. Some examples are dealing with press and police inquiries, non-professional communication with relatives, investigation of complaints, custody of patients' belongings, completion of routine records and returns and arrangements for ambulance transport. In a large department the responsibility for organising this non-professional work should lie with a lay officer of suitable seniority designated for the purpose in the hospital's central administration; whether he is stationed in the administrative offices or in the accident and emergency department itself is a matter for local arrangement. This officer, working in close association with the consultant and sister in charge of the department, should ensure effective liaison, day and night, with other hospital services (maintenance, supplies and ancillary staff), outside services (police, ambulance and press) and the public. Post-qualification training should be given to nurses and other types of staff in the larger accident and emergency units.

VI THE AMBULANCE SERVICES

96. The Sub-Committee had a large amount of helpful evidence on this subject, particularly from the bodies most closely concerned—the County Councils Association, the Association of Municipal Corporations, the National Association of Ambulance Officers, the Society of Medical Officers of Health and the Institute of Certified Ambulance Personnel. After considering this evidence they came to the conclusion that in order to produce an ambulance service fully capable of dealing with accident and other emergency cases attention should be given to the following points.

97. The quality of the vehicles, equipment and staff of the ambulance service, though adequate for much of the routine work of transporting patients unable to travel by public transport, is no longer good enough to deal with serious accidents and other emergencies. The service may also be quantitatively insufficient to deal with peak loads when accidents are numerous, for example because of icy roads.

98. We considered recommending the provision of a special ambulance service in urban areas, based on selected casualty centres, to deal exclusively with such cases. The advantages of this appeared to be that the ambulance crews could be selected and specially trained for accident work, and could take part in the work of the hospital when not out with the ambulance, thus gaining useful experience in dealing with patients and in hospital procedure generally. Where medical treatment was needed before a casualty could be moved, a medical officer could go out from the hospital with the ambulance.

99. Against this, however, we felt that the essential feature of an accident ambulance was that it could be on the road within, say, 60 seconds of a call being received. The crew must therefore be standing by between calls, and only able to take part to a very limited extent in the work of the hospital. Medical staff would rarely be available to go out with ambulances (except in the case of major disasters) and if they were needed at the scene of an accident they could be summoned from the hospital even if the ambulance had not come from there.

100. Further, to base accident ambulances on the casualty centre would be an uneconomic way of running the service, as these ambulances and their crews would perforce be standing idle much of the time. In fact, although in some of the largest centres—London, Birmingham and Middlesex—a proportion of the ambulances are specially equipped for dealing with accidents, these vehicles do other work also. Ambulances (except for sitting case vehicles) are of course normally equipped to deal with accidents, and the difference between the arrangements in London, Birmingham and Middlesex and those elsewhere is primarily one of degree. On the whole, therefore, we favour improvement in training and equipment throughout the ambulance service, to bring standards generally up to those already achieved by the best authorities, rather than the establishment of a separate accident ambulance service. This need not preclude experiments by ambulance authorities, in co-operation with hospital authorities, in making special arrangements for accident ambulances at major accident centres.

101. Whether or not special accident ambulances are provided, ambulance staff should receive part of their post-entry training in hospital. The evidence received gives ground for believing that this would be welcomed by ambulance authorities and staff alike. Apart from this co-operation with the hospital service, ambulance authorities should co-operate with each other where necessary in arranging joint courses of training, and the syllabuses should be reasonably standardised throughout the country.

102. Enquiries made of ambulance authorities showed that in some of the County Boroughs and about half the County Councils no definite instructions are given to ambulance staff on the disposal of cases. Such instructions should be given in all areas so that ambulance staff can take the correct decision in the numerous cases in which it is not possible to consult a doctor on the disposal of a patient injured in an accident. The instructions, which would vary according to local conditions, should be absolutely clear and agreed by the hospital and ambulance authorities.

103. Hospital authorities should make every effort to reduce delays by ambulances at hospitals. These delays might be due to several causes. Sometimes an ambulance is kept for a long time because it is possible that the patient will require transfer to another hospital; in such cases it would be better for the hospital to release the ambulance and summon another later if the patient had to be transferred. Sometimes there are no hospital staff, or none with the necessary training, to take the patient from the reception point to the casualty department or the wards, so that the ambulance staff have to do this; the remedies are proper provision, selection and instruction of orderlies for this specific work, together with more skilled nursing or other staff able to take responsibility for the patient at the reception point. Sometimes ambulances have to wait until the patient can be taken off the stretcher in order to get the stretcher, blanket, pillow and hot water bottle back; this can be avoided by standardising these items of equipment, so that the ambulance crew can leave the patient on the stretcher and draw replacement equipment from a readily accessible hospital store. As a temporary measure until standardisation is obtained we favour the practice, already adopted in some areas, of using a simple canvas or other carrying sheet on top of the more elaborate stretcher to be taken off with the patient by the use of poles on arrival at the hospital. This could be facilitated by providing at the hospital a suitable trolley, etc., on which to place the patient.

104. We noted that the Ministry of Health circulars on ambulance equipment and training had not been revised since 1951, and suggest that this should be done with the above points in mind.

105. Regional Hospital Boards should consult ambulance authorities on their proposed designation of hospitals as accident and emergency units. Ambulance authorities can supply much helpful information on such matters as the population to be served by each centre, the numbers of industrial and traffic accidents and the accessibility of the centre from the surrounding area. They should also be consulted on the design of the approaches to accident

departments, and of course on the day to day working of the ambulance service. The use of helicopters in a few exceptional cases as an alternative to ambulances is another matter on which close consultation between hospital and ambulance authorities will be required.

106. There should be an ambulance control sub-centre in major hospital centres, preferably in or close to the accident unit. More use should be made of radio-telephony direct from the scene of the accident to the accident unit to give advance warning of the number and type of injured persons so that preparations can be made to receive them. This could give ambulance staff an opportunity to speak direct to the doctor. When the casualties reach hospital the ambulance staff should again be given the opportunity of reporting direct to a medical officer, who will often be able to get from them useful information on the cause of injuries and the condition of the patient before arrival at the hospital.

SUMMARY OF PRINCIPAL RECOMMENDATIONS

1. Hospitals should do all they can to co-operate in the researches being carried out into the best methods of preventing road accidents (Paragraph 10).

2. The word "casualty" should be abandoned as the description of any type of hospital service, department, officer or patient. What is now known as the casualty service should be called the "Accident and Emergency Service", and corresponding changes should be made in the description of casualty departments, casualty officers and casualty patients (Paragraphs 58—62).

3. An accident and emergency department should include a reception unit for all undiagnosed emergency cases (Paragraph 63).

4. The department should be designed to allow patients to be brought in direct from the street, seen at once and treated by an experienced doctor or passed on without delay for the appropriate treatment. This means having separate entrances for stretcher cases, with easy access for ambulances, and walking cases, with a reception area immediately adjacent to the accident and emergency department (Paragraph 64).

5. Patients returning for further treatment should not enter through the reception area, but should go direct to the appropriate clinic (Paragraph 64).

6. Many of the present departments are in extremely unsatisfactory buildings, and much building will be required to accommodate properly even the reduced number of accident and emergency units that we propose (Paragraph 64).

7. We have not made detailed recommendations on the design of a unit, but endorse the general principles to be set out in the forthcoming Hospital Building Note of the Ministry of Health, which will take account of the comments we made on drafts of it (Paragraph 64).

8. Without prejudice to the department's primary function of treating accident and emergency cases, some separate provision must be made, at least for the time being, for patients with minor non-traumatic conditions, particularly in the larger cities and in holiday resorts. The important thing is to ensure that these patients do not interfere with the treatment of serious emergency cases (Paragraph 65).

9. Accident and emergency units can help to prevent injuries by giving information to outside bodies. This will involve producing analyses of cases treated by the unit, if possible using a standard record form. The responsibility for seeing that comprehensive and accurate clinical records are kept should lie with the consultant in charge of the unit (Paragraph 66).

10. All injured patients requiring hospital treatment should be taken direct to accident and emergency units staffed and equipped to deal immediately with major injuries and other emergency cases at any time of the day or night. Much education of the public and consultation with representatives of general practitioners and ambulance authorities will be needed before it is generally accepted that a patient in urgent need of treatment should not be taken to the nearest hospital if it has not a unit of this kind (Paragraph 67).

11. An accident and emergency unit should have at least 50 accident beds (Paragraph 68).

12. Some hospitals not designated as accident and emergency centres should provide for the treatment of minor injuries, and may also be able to receive patients after their primary treatment at the accident and emergency centre. Their work should be supervised by the consultants at the major centre (Paragraph 69).

13. A ratio of between 30 and 35 accident beds per 100,000 population should be used for planning, provided that these beds are supplemented by an adequate number of associated geriatric beds. More beds for males than females are required, but the planning of units should allow beds to be used for either sex (Paragraph 71).

14. A unit of the minimum size suggested, 50 beds, would serve a population of some 150,000, and there are very few areas where distances are so great and transport so difficult that a single unit could not provide an efficient service for such a population (Paragraph 73).

15. We do not favour special accident hospitals, because it is better for accident patients to have available to them the full range of services provided at a general hospital (Paragraph 74).

61. The 30—35 beds recommended per 100,000 population should include special accident beds in the proportions of 10 beds for neurosurgery, 5 for plastic surgery and 5 for thoracic surgery per million population. (Paragraph 75).

17. Where an accident and emergency unit is at a hospital with no psychiatric unit psychiatrists from other hospitals should be available quickly for consultation, and it should be possible to admit patients requiring in-patient psychiatric treatment or observation (Paragraph 76).

18. Co-ordination of the accident units should be a function of the Regional Hospital Boards and not of the hospitals at which the special centres for neurosurgery, plastic surgery etc. are located (Paragraph 77).

19. These special centres should accept patients after they have been given immediate treatment at the accident unit. Where a patient cannot be transferred to the special centre consultants from it could attend the accident unit or give advice over the telephone (Paragraph 77).

20. Specialised apparatus requiring a well-trained team to operate it, such as the artificial kidney, could conveniently be in the same hospital as a major accident centre (Paragraph 78).

21. Certain of the major accident and emergency centres should be designated as burns centres for children and for adults (Paragraph 79).

22. The special orthopaedic hospitals and special centres, such as those for paraplegics and plastic surgery, have an important contribution to make to the care of the injured (Paragraph 80).

23. There should be close and continuous co-operation between the hospital service and all outside agencies concerned with the resettlement and training of the injured (Paragraph 81).

24. Junior medical staff should be instructed to seek advice from a consultant on the treatment of patients with major injuries (Paragraph 82).

25. The flow of minor cases should be reduced by providing an adequate general practitioner service at all times (Paragraph 85).

26. The junior medical staff should be adequately supervised by consultants (Paragraph 87).

27. A consultant orthopaedic surgeon should normally be in administrative charge of the accident and emergency unit. His duties should include arranging the daily rotas of medical staff, maintaining liaison with other specialist services and supervising the keeping of clinical records (Paragraph 89).

28. Supervision should be specifically mentioned in the consultants' contracts, which should include an allowance for the cover given at night and at the week-end. An accident and emergency unit should have at least three consultant surgeons, each giving a substantial part of his time to this work. Similarly the special centres for neurosurgery, plastic and thoracic surgery should cover an area large enough to warrant the employment of three consultants (Paragraph 90).

29. Dental surgeons will be needed in proportion to the number of jaw and dental injuries (Paragraph 90).

30. Below the consultants there should be three officers of intermediate grade and an adequate number of senior house officers (Paragraph 90).

31. Rotation of staff between accident and general surgical work is valuable, particularly at registrar level (Paragraph 90).

32. The introduction of the "medical assistant" grade should allow accident and emergency units and hospitals receiving minor injuries to be staffed by experienced officers (Paragrapn 90).

33. The primary task of general practitioners, so far as this service is concerned, is to deal with minor accidents and emergencies at any time of the day or night. Where they serve on a sessional basis as part-time medical assistants in an accident and emergency department the sessions should if possible be shared on a rota covering evenings and weekends as well as normal working hours. The presence of a general practitioner in a "casualty" department often leads to a striking reduction in the number of patients who attend the department for minor conditions which could have been treated by their own doctor (Paragraph 91).

34. In rural areas general practitioners carry a much greater share of responsibility for the accident services. In remote areas cottage hospitals may have to give first aid treatment to major injuries and deal with minor ones. An effective rota of general practitioners able to attend at short notice is therefore required, and these peripheral units should be properly supervised by consultants from the accident unit (Paragraph 92).

35. Medical students should make an intensive study of trauma for, if possible, three months (Paragraph 93).

36. At least six months of training of all surgeons should be in an accident and emergency unit, and hospitals should make rotating appointments at registrar level for two years, giving experience in many types of surgery. It might be possible to improve the training of general practitioners in the treatment of trauma, for example by refresher courses. All surgical senior registrars should participate in the work of accident and emergency units by short periods of duty or longer periods in rotation (Paragraph 94).

37. A consultant anaesthetist, radiologist and pathologist should be responsible for organising the services in his specialty, to give adequate support to the accident and emergency service at all times. At least two consultant anaesthetists should be available for accident and emergency work (Paragraph 95).

38. There should be an adequate nursing, radiographic, secretarial, clerical, reception, portering and other ancillary staff. In a large department a lay officer of suitable seniority should be responsible for organising the non-professional work of the unit (Paragraph 95).

39. Training and equipment should be improved throughout the ambulance service to bring standards up to those of the best authorities (Paragraph 100).

40. Ambulance staff should receive part of their post-entry training in hospital, and ambulance authorities should co-operate with each other in joint courses of training, using reasonably standardised syllabuses (Paragraph 101).

41. Clear instructions on the disposal of cases should be given to ambulance staff, by agreement between the hospital and ambulance authorities (Paragraph 102).

42. Hospital authorities should make every effort to reduce delays hy ambulances at hospitals (Paragraph 103).

43. The Ministry of Health circulars on ambulance equipment and training should be revised (Paragaph 104).

44. Regional Hospital Boards should consult ambulance authorities on the designation of accident and emergency units, the design of the approaches to them, the day to day working of the ambulance service and the exceptional use of helicopters instead of ambulances (Paragraph 105).

45. There should be an ambulance control sub-centre in major hospital centres, preferably in or close to the accident unit. More use should be made of radio-telephony from the scene of an accident to the accident unit (Paragraph 106).

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APPENDIX I

List of Bodies and Persons submitting Written Evidence

Association of Hospital Management Committees.
Association of Industrial Medical Officers.
Association of Municipal Corporations.
British Association of Physical Medicine.
British Association of Plastic Surgeons.
College of General Practitioners.
County Councils Association.
Executive Councils Association.
Faculty of Radiologists.
Institute of Certified Ambulance Personnel.
Air Commodore R. C. Jackson, M.R.C.S., F.R.C.P.E., Royal Air Force.
Leeds Regional Hospital Board.
National Association of Ambulance Officers.
Newcastle Regional Hospital Board.
North West Metropolitan Regional Hospital Board.
Royal College of Nursing.
Royal Medico-Psychological Association.
South East Metropolitan Regional Hospital Board.
Sheffield Regional Hospital Board.
Society of Medical Officers of Health.
Teaching Hospitals Association.

APPENDIX II

Survey of the work of "casualty" departments in hospitals in England and Wales in the week 24th to 31st October, 1960

Scope and statistical tables

The survey was conducted as a result of our request for information about the nature of the work done in existing hospital "casualty" departments. It was designed to cover the work done in all National Health Service hospitals of England and Wales in the week 24th to 31st October, 1960. In the case of two hospitals a November week was accepted in lieu of the survey week.

The survey was designed to give information about new patients at their first attendance in the following classifications:—

(*a*) Age and sex of patient

(*b*) Source of case:
- General Practitioner
- Own volition
- Accident—ambulance
- Accident—other transport
- Other

(*c*) Condition for which treatment was sought:
- Multiple injuries
- Bruise
- Sprain
- Fracture
- Dislocation
- Wound
- Burn
- Sepsis
- Foreign body: E.N.T.
  - Eye
  - Other
- Dental
- Obst./Gynae.
- Psychiatric
- Other surgical
- Other medical
- No abnormality detected

(*d*) Disposal of case:
- No further treatment required
- Own hospital — further treatment in casualty
- ,, ,, to out-patient department
- ,, ,, to in-patient department
- To another hospital
- To works or factory surgery
- To general practitioner
- Other

(*e*) Patient seen in hospital by:

House Officer
S.H.O.
J.H.M.O.
Registrar
Senior Registrar
S.H.M.O./S.C.O.S.H.D.O.
Consultant
General Practitioner

If no doctor:
Registered nurse
Enrolled assistant nurse
Student nurse
Pupil assistant nurse
Other

No enquiry was made into the nature of accidents (e.g. home, industrial, traffic), or of treatment given.

The hospitals taking part also recorded the total number of patients attending the "casualty" department, including patients attending for further treatment of a given condition, as prescribed on a previous visit to the department.

The survey forms were sent to those Hospital Management Committees and Boards of Governors whose annual returns to the Ministry for 1959 showed any "casualty" department work; and these Committees and Boards were requested to arrange for the completion of the forms in each hospital in their group which had a "casualty" department. The Public Dispensary and Hospital, Leeds (which is classed as a clinic in the Ministry classification), the Croydon Eye Unit and the Nuffield Diagnostic Centre at Corby were also included.

Altogether 896 hospitals (including the three units referred to above) were circularised for the enquiry and replies were received from them all, but a number which treated only an occasional casualty were reported to have no "casualty" department and were omitted from the analysis. A further number reported having a "casualty" department but seeing no new patients in it in the survey week. Records of new patients were received from 789 hospitals and the tables which follow represent an analysis of these hospitals and of the patients seen in their "casualty" departments.

In so far as new patients were concerned (i.e. those attending the "casualty" department for the first time with a given condition), the survey record was confined to those whose reception and disposal were the responsibility of the "casualty" department. It was designed to cover emergency admissions only if these were arranged through the "casualty" department and were seen by a doctor in that department. Patients booked in through a "casualty" department, whose admission to hospital had been arranged elsewhere, were to be excluded but it is possible that a few hospitals have inadvertently included such patients.

TABLE I

Number of new patients: Analysis by diagnostic class and source

Number

	Source						
	All sources	General Practitioner	Own volition	Accident		Other	Not stated
				Ambulance	Other transport		
All diagnostic classes: Total	104,660	25,861	51,905	10,004	8,668	7,733	489
Multiple injuries	1,788	128	283	1,107	209	54	7
Bruise...	10,600	2,584	5,111	1,160	976	714	55
Sprain	11,726	3,963	5,599	587	911	628	38
Fracture	10,961	3,783	3,152	1,996	1,276	700	54
Dislocation	900	247	351	132	93	72	5
Wound	24,878	1,709	15,024	2,471	3,623	1,943	108
Burn ...	2,605	209	1,639	214	320	210	13
Sepsis	6,814	2,372	3,962	23	56	373	28
Foreign body: E.N.T.	1,142	220	786	26	32	72	6
Eye ...	8,040	519	6,001	109	584	793	34
Other	2,162	423	1,376	68	105	180	10
Dental	1,195	136	922	14	8	107	8
Obstetric/Gynaecological	883	586	193	50	5	46	3
Psychiatric ...	224	45	81	60	3	35	—
Other surgical	8,219	4,581	2,352	475	162	614	35
Other medical	9,768	3,683	3,775	1,150	156	962	42
No abnormality detected	2,311	564	1,122	312	122	180	11
Not stated ...	444	109	176	50	27	50	32

TABLE II

Number of new patients: Analysis by diagnostic class and disposal

Number

	Disposal							
			Own hospital					
	All disposals	No further treatment	"Casualty" dept.	Out-patient dept.	In-patient dept.	Another Hospital	General Practitioner	Other and not known
All diagnostic classes: Total ...	104,660	18,803	46,608	13,030	9,826	2,260	11,595	2,538
Multiple injuries	1,788	94	595	78	791	95	96	39
Bruise	10,600	3,347	4,565	464	182	58	1,799	185
Sprain	11,726	1,720	6,725	955	70	97	2,016	143
Fracture	10,961	196	3,809	4,380	1,515	508	463	90
Dislocation	900	68	371	271	62	56	61	11
Wound	24,878	3,967	15,589	1,278	660	310	2,675	399
Burn	2,605	215	1,770	199	181	59	153	28
Sepsis	6,814	359	5,008	546	161	74	591	75
Foreign body: E.N.T.	1,142	517	191	197	58	64	95	20
Eye	8,040	3,009	2,710	1,282	88	157	334	460
Other	2,162	742	906	132	97	39	184	62
Dental	1,195	349	168	160	27	117	173	201
Obstetric/Gynaecological	883	111	39	118	420	34	128	33
Psychiatric	224	32	14	33	48	58	31	8
Other surgical	8,219	910	2,290	1,445	2,530	192	712	140
Other medical	9,768	1,723	1,469	1,422	2,886	318	1,630	320
No abnormality detected	2,311	1,402	314	43	14	12	443	83
Not stated	444	42	75	27	36	12	11	241

TABLE III

Number of new patients: Analysis by age, sex and source

Number

		Source						
					Accident			
		All sources	General Practitioner	Own volition	Ambulance	Other transport	Other	Not stated
All ages	...Total	104,660	25,861	51,905	10,004	8,668	7,733	489
	Male	68,705	14,199	35,776	6,653	6,439	5,360	278
	Female	35,210	11,513	15,763	3,267	2,168	2,318	181
	Not stated	745	149	366	84	61	55	30
0–4	...Total	7,529	2,014	4,036	401	464	587	27
	Male	4,334	1,172	2,303	239	266	338	16
	Female	3,125	825	1,699	158	193	240	10
	Not stated	70	17	34	4	5	9	1
5–14	...Total	16,040	4,332	8,251	1,173	1,104	1,112	68
	Male	10,296	2,579	5,467	759	743	713	35
	Female	5,608	1,729	2,707	399	356	386	31
	Not stated	136	24	77	15	5	13	2
15–29 ...	...Total	32,867	5,941	17,982	3,172	3,103	2,527	142
	Male	23,726	3,604	13,318	2,428	2,461	1,823	92
	Female	8,931	2,305	4,548	720	621	689	48
	Not stated	210	32	116	24	21	15	2
30–59	...Total	37,949	9,424	18,667	3,447	3,395	2,839	177
	Male	25,488	5,086	13,132	2,418	2,646	2,102	104
	Female	12,227	4,288	5,417	1,007	725	723	67
	Not stated	234	50	118	22	24	14	6
60 and over	...Total	9,953	4,096	2,871	1,725	576	633	52
	Male	4,670	1,733	1,490	750	305	365	27
	Female	5,220	2,340	1,361	961	267	266	25
	Not stated	63	23	20	14	4	2	—
Age not stated	...Total	322	54	98	86	26	35	23
	Male	191	25	66	59	18	19	4
	Female	99	26	31	22	6	14	—
	Not stated	32	3	1	5	2	2	19

TABLE IV

Number of new patients: Analysis by group of diagnostic classes, disposal and source

Number

	Source						
	All sources	General Practitioner	Own volition	Accident		Other	Not stated
				Ambulance	Other transport		
All diagnostic classes							
All forms of disposal: Total	104,660	25,861	51,905	10,004	8,668	7,733	489
No further treatment	18,803	2,760	11,865	1,333	1,327	1,443	75
Own hospital: C.D.	46,608	9,699	25,887	3,048	4,444	3,325	205
O.P.D.	13,030	4,382	5,446	988	1,097	1,059	58
I.P.D.	9,826	4,451	1,206	3,019	465	636	49
Another hospital	2,260	400	972	415	249	217	7
General Practitioner	11,595	3,809	5,218	989	871	659	49
Other and not stated	2,538	360	1,311	212	215	394	46
Multiple injuries, bruise, sprain, fracture, dislocation, wound or burn							
All forms of disposal: Total	63,458	12,623	31,159	7,667	7,408	4,321	280
No further treatment	9,607	1,377	5,836	759	905	691	39
Own hospital: C.D.	33,424	5,646	18,375	2,821	4,107	2,332	143
O.P.D.	7,625	2,384	2,828	877	931	568	37
I.P.D.	3,461	481	371	2,139	331	120	19
Another hospital	1,183	155	424	292	216	92	4
General Practitioner	7,263	2,485	2,945	673	770	357	33
Other and not stated	895	95	380	106	148	161	5

Number of new patients: Analysis by group of diagnostic classes, disposal and source

Table IV *continued*

Number

	Source						
				Accident			
	All sources	General Practitioner	Own volition	Ambulance	Other transport	Other	Not stated
Sepsis							
All forms of disposal: Total	6,814	2,372	3,962	23	56	373	28
No further treatment	359	67	258	—	8	26	—
Own hospital: C.D.	5,008	1,778	2,897	12	37	259	25
O.P.D.	546	193	301	4	5	42	1
I.P.D.	161	108	33	6	3	11	—
Another hospital	74	22	41	1	—	9	1
General Practitioner	591	185	385	—	3	18	—
Other and not stated	75	19	47	—	—	8	1
Foreign body: E.N.T., eye, other							
All forms of disposal: Total	11,344	1,162	8,163	203	721	1,045	50
No further treatment	4,268	286	3,329	47	272	316	18
Own hospital: C.D.	3,807	424	2,704	72	218	373	16
O.P.D.	1,611	228	1,037	21	129	189	7
I.P.D.	243	61	100	39	16	24	3
Another hospital	260	28	194	5	17	16	—
General Practitioner	613	112	425	10	37	28	1
Other and not stated	542	23	374	9	32	99	5

TABLE IV *concluded*

Number of new patients: Analysis by group of diagnostic classes, disposal and source

Number

	Source						
				Accident			
	All sources	General Practitioner	Own volition	Ambulance	Other transport	Other	Not stated
Other (including not known and not stated)							
All forms of disposal: Total	23,044	9,704	8,621	2,111	483	1,994	131
No further treatment	4,569	1,030	2,442	527	142	410	18
Own hospital: C.D.	4,369	1,851	1,911	143	82	361	21
O.P.D.	3,248	1,577	1,280	86	32	260	13
I.P.D.	5,961	3,801	702	835	115	481	27
Another hospital	743	195	313	117	16	100	2
General Practitioner	3,128	1,027	1,463	306	61	256	15
Other and not stated	1,026	223	510	97	35	126	35

Number of new patients: Analysis by group of diagnostic classes, grade of staff seeing patients at the " casualty " department and source

TABLE V

Number

	Source						
	All sources	General Practitioner	Own volition	Accident		Other	Not stated
				Ambulance	Other transport		
All diagnostic classes							
All staff: Total ...	104,660	25,861	51,905	10,004	8,668	7,733	489
House Officer	24,297	4,690	13,304	2,711	1,790	1,686	116
Senior House Officer	35,480	8,477	17,763	3,662	2,984	2,452	142
J.H.M.O.	9,916	2,519	4,825	928	890	710	44
Registrar	8,473	2,745	3,579	923	454	735	37
Senior Registrar	1,042	373	341	157	72	96	3
S.H.M.O. or equivalent	7,689	2,432	3,026	738	788	675	30
Consultant	1,582	706	354	190	126	200	6
General Practitioner	7,533	2,701	2,945	494	897	457	39
Non-medical staff	8,184	1,107	5,554	158	645	681	39
Status of staff not known	464	111	214	43	22	41	33
Multiple injuries, bruise, sprain, fracture, dislocation, wound or burn							
All staff: Total	63,458	12,623	31,159	7,667	7,408	4,321	280
House Officer	14,571	1,982	8,006	2,014	1,534	970	65
Senior House Officer	22,527	4,690	10,885	2,884	2,599	1,379	90
J.H.M.O.	6,842	1,512	3,327	745	779	449	30
Registrar	4,271	920	1,909	644	372	402	24
Senior Registrar	484	88	193	99	65	38	1
S.H.M.O. or equivalent	5,363	1,515	2,064	590	714	463	17
Consultant	738	227	169	166	107	65	4
General Practitioner	4,684	1,154	2,021	396	803	286	24
Non-medical staff	3,867	519	2,516	117	428	266	21
Status of staff not known	111	16	69	12	7	3	4

TABLE V *continued*

Number of new patients: Analysis by group of diagnostic classes, grade of staff seeing patients at the "casualty" department and source

Number

	Source						
	All sources	General Practitioner	Own volition	Accident		Other	Not stated
				Ambulance	Other transport		
Sepsis							
All staff: Total	6,814	2,372	3,962	23	56	373	28
House Officer	1,639	376	1,145	10	14	86	8
Senior House Officer	2,248	782	1,325	2	15	112	12
J.H.M.O.	706	242	402	3	9	48	2
Registrar	495	190	268	3	2	31	1
Senior Registrar	29	16	12	—	—	1	—
S.H.M.O. or equivalent	459	226	194	2	6	30	1
Consultant	94	59	26	1	—	8	—
General Practitioner	604	318	248	2	5	28	3
Non-medical staff	523	158	331	—	5	28	1
Status of staff now known	17	5	11	—	—	1	—
Foreign body: E.N.T., eye, other							
All staff: Total	11,344	1,162	8,163	203	721	1,045	50
House Officer	2,149	190	1,601	57	115	173	13
Senior House Officer	3,598	430	2,512	78	214	354	10
J.H.M.O.	809	99	557	18	65	66	4
Registrar	783	113	544	9	34	78	5
Senior Registrar	68	14	35	—	5	14	—
S.H.M.O. or equivalent	598	83	395	14	42	62	2
Consultant	154	45	76	3	8	22	—
General Practitioner	538	107	351	6	39	32	3
Non-medical staff	2,618	80	2,072	17	197	239	13
Status of staff not known	29	1	20	1	2	5	—

Number of new patients: Analysis by group of diagnostic classes, grade of staff seeing patients at the "casualty" department and source

TABLE V *concluded*

Number

	Source						
				Accident			
	All sources	General Practitioner	Own volition	Ambulance	Other transport	Other	Not stated
Other (including not known and not stated)							
All staff : Total	23,044	9,704	8,621	2,111	483	1,994	131
House Officer	5,938	2,142	2,552	630	127	457	30
Senior House Officer	7,107	2,575	3,041	698	156	607	30
J.H.M.O.	1,559	666	539	162	37	147	8
Registrar	2,924	1,522	858	267	46	224	7
Senior Registrar	461	255	101	58	2	43	2
S.H.M.O. or equivalent	1,269	608	373	132	26	120	10
Consultant	596	375	83	20	11	105	2
General Practitioner	1,707	1,122	325	90	50	111	9
Non-medical staff	1,176	350	635	24	15	148	4
Status of staff not known	307	89	114	30	13	32	29

TABLE VI

Number of new patients: Analysis by group of diagnostic classes, grade of staff seeing patients at the " casualty " department and disposal

Number

	Disposal							
			Own hospital					
	All disposals	No further treatment	"Casualty" dept.	Out-patient dept.	Io-patient dept.	Another hospital	General Practitioner	Other and not known
All diagnostic classes								
All staff: Total	104,660	18,803	46,608	13,030	9,826	2,260	11,595	2,538
House Officer	24,297	5,124	10,410	2,902	2,801	553	2,028	479
Senior House Officer	35,480	6,009	17,511	4,555	2,940	631	3,256	578
J.H.M.O.	9,916	1,645	5,050	964	747	166	1,188	156
Registrar	8,473	1,238	3,225	1,397	1,578	168	733	134
Seoior Registrar	1,042	119	276	153	301	33	135	25
S.H.M.O. or equivalent	7,689	1,095	3,526	1,006	607	147	1,181	127
Consultant	1,582	167	378	436	398	43	123	37
General Practitioner	7,533	1,368	2,931	775	350	319	1,615	175
Non-medical staff	8,184	1,996	3,204	816	66	192	1,304	606
Status of staff not known	464	42	97	26	38	8	32	221
Multiple injuries, bruise, sprain, fracture, dislocation, wound or burn								
All staff: Total	63,458	9,607	33,424	7,625	3,461	1,183	7,263	895
House Officer	14,571	2,770	7,621	1,810	823	241	1,079	227
Senior House Officer	22,527	3,172	12,852	2,726	1,140	317	2,087	233
J.H.M.O.	6,842	993	3,762	695	320	96	886	90
Registrar	4,271	642	2,000	712	419	74	376	48
Senior Registrar	484	60	171	62	83	17	80	11
S.H.M.O. or equivalent	5,363	657	2,725	641	281	62	916	81
Consultant	738	72	195	210	170	15	58	18
General Practitioner	4,684	651	2,036	529	192	233	956	87
Non-medical staff	3,867	576	2,013	231	26	127	812	82
Status of staff not known	111	14	49	9	7	1	13	18

TABLE VI *continued*

Number of new patients: Analysis by group of diagnostic classes, grade of staff seeing patients at the "casualty" department and disposal

Number

	All disposals	No further treatment	Disposal: Own hospital: "Casualty" dept.	Out-patient dept.	In-patient dept.	Another hospital	General Practitioner	Other and not known
Sepsis								
All staff: Total	6,814	359	5,008	546	161	74	591	75
House Officer	1,639	116	1,194	142	34	20	116	17
Senior House Officer	2,248	127	1,760	140	38	27	131	25
J.H.M.O.	706	28	563	31	22	5	52	5
Registrar	495	28	378	29	26	8	21	5
Senior Registrar	29	1	16	3	5	1	2	1
S.H.M.O. or equivalent	459	11	325	56	15	3	44	5
Consultant	94	5	60	9	11	—	9	—
General Practitioner	604	27	402	57	9	5	96	8
Non-medical staff	523	16	300	77	1	5	118	6
Status of staff not known	17	—	10	2	—	—	2	3
Foreign body: E.N.T., eye, other								
All staff: Total	11,344	4,268	3,807	1,611	243	260	613	542
House Officer	2,149	882	717	300	60	63	81	46
Senior House Officer	3,598	1,324	1,358	535	75	70	158	78
J.H.M.O.	809	326	327	68	18	23	35	12
Registrar	783	204	361	139	28	12	25	14
Senior Registrar	68	15	26	14	6	2	4	1
S.H.M.O. or equivalent	598	212	229	69	13	22	44	9
Consultant	154	18	27	73	23	1	7	5
General Practitioner	538	197	144	41	6	29	104	17
Non-medical staff	2,618	1,088	603	368	12	38	154	355
Status of staff not known	29	2	15	4	2	—	1	5

TABLE VI *concluded*

Number of new patients: Analysis by group of diagnostic classes, grade of staff seeing patients at the "casualty" department and disposal

Number

	Disposal							
			Own hospital					
	All disposals	No further treatment	"Casualty" dept.	Out-patient dept.	In-patient dept.	Another hospital	General Practitioner	Other and not known
Other (including not known and not stated)								
All staff: Total	23,044	4,569	4,369	3,248	5,961	743	3,128	1,026
House Officer	5,938	1,356	878	650	1,884	229	752	189
Senior House Officer	7,107	1,386	1,541	1,154	1,687	217	880	242
J.H.M.O.	1,559	298	398	170	387	42	215	49
Registrar	2,924	364	486	517	1,105	74	311	67
Senior Registrar	461	43	63	74	207	13	49	12
S.H.M.O. or equivalent	1,269	215	247	240	298	60	177	32
Consultant	596	72	96	144	194	27	49	14
General Practitioner	1,707	493	349	148	143	52	459	63
Non-medical staff	1,176	316	288	140	27	22	220	163
Status of staff not known	307	26	23	11	29	7	16	195

TABLE VII

Number of new patients: Analysis by size of " casualty " department and source

Number

	Source						
				Accident			
	All sources	General Practitioner	Own volition	Ambulance	Other transport	Other	Not stated
All " casualty " departments: Total	104,660	25,861	51,905	10,004	8,668	7,733	489
Under 100 new patients	16,740	4,973	8,167	1,005	1,454	1,044	97
100–199 ,, ,, ...	19,953	5,186	9,823	1,902	1,628	1,313	101
200–299 ,, ,, ...	19,321	4,478	9,891	2,032	1,441	1,403	76
300–399 ,, ,, ...	16,727	4,027	8,225	1,732	1,504	,1141	98
400–499 ,, ,, ...	10,645	2,816	4,694	1,235	940	910	50
500 or more ,, ,, ...	21,274	4,381	11,105	2,098	1,701	1,922	67

TABLE VIII

Number of new patients: Analysis for two groups of diagnostic classes, by size of " casualty " department and disposal

Number

	Disposal							
			Own hospital					
	All disposals	No further treatment	"Casualty" dept.	Out-patient dept.	In-patient dept.	Another hospital	General Practitioner	Other and not known
All diagnostic classes								
All " casualty " departments: Total	104,660	18,803	46,608	13,030	9,826	2,260	11,595	2,538
Under 100 new patients	16,740	3,159	6,429	1,881	1,288	663	2,998	322
100–199 " "	19,953	3,488	9,854	2,042	1,972	389	1,801	407
200–299 " "	19,321	3,104	9,849	2,133	1,893	354	1,623	365
300–399 " "	16,727	3,279	7,533	1,886	1,874	261	1,520	374
400–499 " "	10,645	1,936	4,423	1,518	1,330	154	1,096	188
500 or more " "	21,274	3,837	8,520	3,570	1,469	439	2,557	882
Multiple injuries, bruise, sprain, fracture, dislocation, wound or burn								
All " casualty " departments: Total	63,458	9,607	33,424	7,625	3,461	1,183	7,263	895
Under 100 new patients	9,993	1,493	4,466	1,051	580	447	1,816	140
100–199 " "	12,411	1,799	7,280	1,073	775	237	1,088	159
200–299 " "	12,060	1,593	7,156	1,308	673	182	1,008	140
300–399 " "	10,082	1,478	5,688	1,133	515	105	1,022	141
400–499 " "	6,535	1,065	3,123	1,077	370	75	735	90
500 or more " "	12,377	2,179	5,711	1,983	548	137	1,594	225
Sepsis, foreign body and other (including not known and not stated)								
All " casualty " departments: Total	41,202	9,196	13,184	5,405	6,365	1,077	4,332	1,643
Under 100 new patients	6,747	1.666	1,963	830	708	216	1,182	182
100–199 " "	7,542	1,689	2,574	969	1,197	152	713	248
200–299 " "	7,261	1,511	2,693	825	1,220	172	615	225
300–399 " "	6,645	1,801	1,845	753	1,359	156	498	233
400–499 " "	4,110	871	1,300	441	960	79	361	98
500 or more " "	8,897	1,658	2,809	1,587	921	302	963	657

Number of new patients: Analysis by Regional Hospital Boards, London undergraduate and post-graduate and provincial teaching hospitals and source

TABLE IX

Number

	Source						
	All sources	General Practitioner	Own volition	Accident		Other	Not stated
				Ambulance	Other transport		
All hospitals: Total	104,660	25,861	51,905	10,004	8,668	7,733	489
All R.H.B. hospitals: Total	85,966	21,955	41,215	8,468	7,794	6,112	422
Newcastle R.H.B.	5,730	1,610	2,460	581	561	475	43
Leeds ,,	5,682	1,176	3,111	511	440	419	25
Sheffield ,,	6,883	1,903	2,996	868	685	412	19
East Anglian ,,	1,988	529	1,008	135	111	193	12
N.W. Met. ,,	8,062	1,901	4,037	806	551	701	66
N.E. Met. ,,	7,112	2,105	3,350	676	491	458	32
S.E. Met. ,,	6,794	1,533	3,579	781	455	418	28
S.W. Met. ,,	6,398	1,503	3,142	672	620	434	27
Oxford ,,	2,131	554	1,085	191	218	76	7
South West'n ,,	4,972	1,484	2,470	389	406	200	23
Wales ,,	4,361	2,005	1,461	316	317	245	17
Birmingham ,,	9,922	2,191	4,574	832	1,277	999	49
Manchester ,,	8,568	1,802	4,185	1,040	908	599	34
Liverpool ,,	4,290	981	2,259	394	340	284	32
Wessex ,,	3,073	678	1,498	276	414	199	8
All teaching hospitals: Total	18,694	3,906	10,690	1,536	874	1,621	67
London undergraduate	7,676	1,536	4,938	568	174	440	20
London post-graduate	1,099	338	598	33	38	91	1
Provincial	9,919	2,032	5,154	935	662	1,090	46

TABLE X

Number of new patients: Analysis by groups of hospitals in central areas of selected towns (1) and source

Number

	Source						
	All sources	General Practitioner	Own volition	Accident		Other	Not stated
				Ambulance	Other transport		
London	27,437	6,345	14,996	2,542	1,521	1,916	117
Birmingham	2,338	406	930	307	473	220	2
Manchester	1,649	230	987	159	137	132	4
Newcastle	1,121	289	300	212	125	186	9
Liverpool	1,067	95	803	80	19	67	3
Leeds	1,021	248	444	143	74	112	—

(1) The hospitals in the groups are as follows:—

London	Guy's, St. Thomas', Westminster, St. George's, Charing Cross, Middlesex, University College, Royal Free, Royal Hospital of St. Bartholomew.
Birmingham	General Hospital, Accident hospital.
Manchester	Royal Infirmary, Ancoats, Salford Royal.
Newcastle	Royal Victoria Infirmary, General hospital.
Liverpool	Royal Infirmary, Royal Southern, David Lewis Northern.
Leeds	General Infirmary, St. James's.

APPENDIX 3

Hospital In-patient Enquiry Statistics

Note: The three tables which follow are derived from data collected by the General Register Office, on a ten per cent sample basis, from National Health Service hospitals in England and Wales (other than psychiatric hospitals). The general methods used for this enquiry are fully described in the reports made by the General Register Office, which are published annually.

The figures given in these tables are estimates derived from the sample data, obtained by multiplying the sample figures by the ratio of all discharges (including deaths) in the year in question, from the hospitals eligible to take part in the enquiry, to the total number of discharges in the sample in that year. The ratio for 1959 was 10.38:1.

Estimated number of discharges (including deaths) in 1960, and discharge rates (spells) per 10,000 population for 1957 to 1960: Analysis by injury diagnostic group.

TABLE I

Diagnosis		Estimated number of discharges and deaths 1960	Estimated discharge rates (spells) per 10,000 population			
ICD numbers (N codes)	Description		1957	1958	1959	1960
	All diagnostic classes: Total	3,787,730	776·0	788·0	807·3	827·8
800–996	All injury classes:—Total	320,130	58·4	60·3	66·4	70·0
800–804, 850–856	Head injuries	89,840	15·3	15·8	18·1	19·6
805–839	Other fractures and dislocations ...	115,850	21·4	22·7	24·3	25·3
940–949	Burns	14,020	3·1	3·1	3·2	3·1
960–979	Effects of poisons	23,310	3·5	3·9	4·4	5·1
840–848, 860–936 950–959, 980–996	Other injuries	77,110	15·1	14·8	16·4	16·9

TABLE II

Estimated number of discharges (including deaths) in 1959: Analysis by injury diagnostic class and sex of patient

Number

Diagnosis ICD numbers (N codes)	Diagnosis Description	Total	Male	Female
	All diagnostic classes: Total	3,664,100	1,546,400	2,117,700
800–996	All injury classes: Total	301,500	193,900	107,600
800–804, 850–856	Head injuries: Total	82,300	59,300	23,000
802	Fracture of face bones	9,400	7,300	2,100
800, 801, 803, 804	Other skull fracture	11,200	8,400	2,800
852	Concussion	30,600	21,900	8,700
853, 855	Cerebral laceration and contusion: other and unspecified intracranial haemorrhage following injury	800	600	200
850, 851, 854, 856	Other and unspecified head injuries	30,300	21,100	9,200
805–848, 860–996	Other injuries: Total	219,200	134,600	84,6 00
	Fracture and dislocation of vertebral column:—			
805	Without mention of spinal cord lesion	3,900	2,700	1,200
806	With mention of spinal cord lesion	500	400	100
807	Fracture of rib(s), sternum, larynx	3,300	2,600	700
813	Fracture of radius and ulna	12,600	7,000	5,600
820	Fracture of neck of femur	15,700	3,800	11,900
821	Fracture of other and unspecified parts of femur	13,500	6,400	7,100
823	Fracture of tibia and fibula	17,100	12,100	5,000
808–812, 814–819 822, 824–829	Other (not skull—) fractures	36,500	24,100	12,400
830–839	Dislocations without fracture	7,200	4,900	2,300
840–848	Sprains and strains	5,200	3,600	1,600

TABLE II *continued*

Estimated number of discharges (including deaths) in 1959 : Analysis by injury diagnostic class and sex of patient

Number

Diagnosis		Total	Male	Female
ICD numbers (N codes)	Description			
860–869	Internal injuries of chest, abdomen or pelvis	2,300	1,800	500
	Laceration and opeo wound:—			
870	Open wound of eye and orbit	3,000	2,600	400
871–879	Other, of face, neck and trunk	9,800	6,800	3,000
884, 887	Finger(s) including traumatic amputation	7,000	5,500	1,500
883	Hand, other than finger(s) alone	2,400	1,900	500
890–892	Knee, leg, hip, thigh or ankle	4,500	3,100	1,400
880–882, 885, 886, 888, 893–908	Other	7,300	5,200	2,100
910–929	Superficial injury, contusion and crushing with intact skin surface ...	14,100	10,100	4,000
	Effects of foreign body entering through orifice:—			
930	In eye and adnexa	1,100	1,000	100
931–936	Other	5,200	2,600	2,600
940–949	Burns	14,400	8,800	5,600
	Effects of poisons:—			
971	Barbituric acids and derivatives	7,500	2,500	5,000
972	Aspirin and salicylates	3,000	1,300	1,700
968	Carbon monoxide	2,200	900	1,300
960–967, 969, 970, 973–979	Other	7,500	3,900	3,600
950–959, 980–996	Other and unspecified (not head—) injuries	12,400	9,000	3,400

TABLE III

Estimated number of discharges (including deaths) in 1959 and estimated percentage distributions by age of patient: Analysis for selected injury diagnostic classes or groups for male and female patients

Diagnosis		Sex	Estimated number of discharges and deaths	Percentage distributions by age of patient					
ICD numbers (N codes)	Description			All ages	Age				
					0–4	5–14	15–44	45–64	65 and over
800–804	Skull fracture	M	15,700	100	8	17	53	17	5
		F	4,900	100	13	19	39	19	10
853, 855	Cerebral laceration and contusion; other and unspecified intracranial haemorrhage following injury	M	600	100	6	7	41	28	18
		F	200	100	7	14	29	14	36
852	Concussion...	M	21,900	100	7	19	53	15	6
		F	8,700	100	10	17	38	20	15
850, 851, 854, 856	Other head injuries	M	21,100	100	10	21	47	16	6
		F	9,200	100	14	21	30	17	18
805, 806	Fracture and dislocation of vertebral column ...	M	3,100	100	—	4	55	28	13
		F	1,300	100	—	5	38	22	35
807	Fracture of rib(s), sternum and larynx	M	2,600	100	—	2	28	52	18
		F	700	100	—	1	19	40	40
820	Fracture of neck of femur	M	3,800	100	—	2	12	20	66
		F	11,900	100	—	—	1	14	85
821	Fracture of other and unspecified parts of femur	M	6,400	100	16	14	31	17	22
		F	7,100	100	6	4	5	16	69
808–819, 822–829	Fractures not specified above	M	43,200	100	3	18	51	21	7
		F	23,000	100	3	17	18	28	34
940–949	Burns	M	8,800	100	29	19	33	14	5
		F	5,600	100	35	17	22	14	12
971	Effects of poisons—barbituric acid and derivatives	M	2,500	100	5	1	50	35	9
		F	5,000	100	2	2	59	25	12
960–970, 972–979	Effects of poisons—other...	M	6,100	100	43	4	29	14	10
		F	6,600	100	28	3	40	16	13

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